American Druggist

AN ILLUSTRATED TRADE JOURNAL.

VOL. XX. NO. 13. NEW YORK, JULY 1ST, 1891. WHOLE NO. 211.

THE MANUFACTURE OF OLIVE OIL.

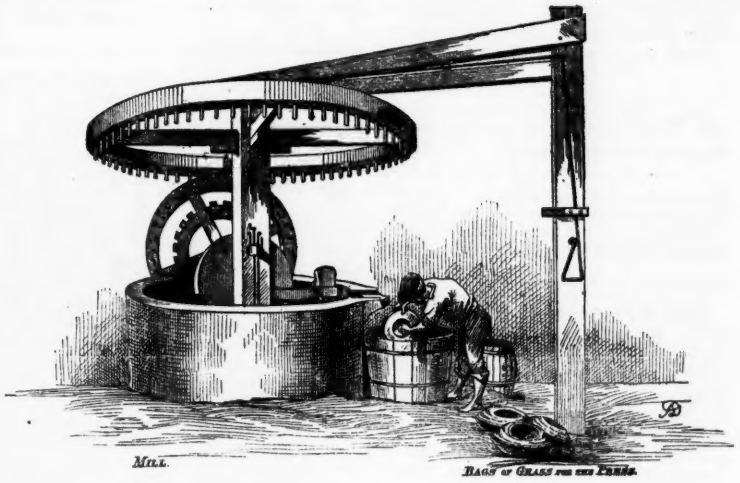
UNITED STATES CONSUL BRADLEY, at Nice, in the course of an official report on "Olive Culture" on the Mediterranean coast of France, furnishes the following:

Oil Mills.—The olives being gathered, the farmer here either takes them to the mill at once, if he sells to the miller by weight; or spreads them in the sun or granary to dry out some of the moisture, if they are simply to be ground by weight for his own benefit.

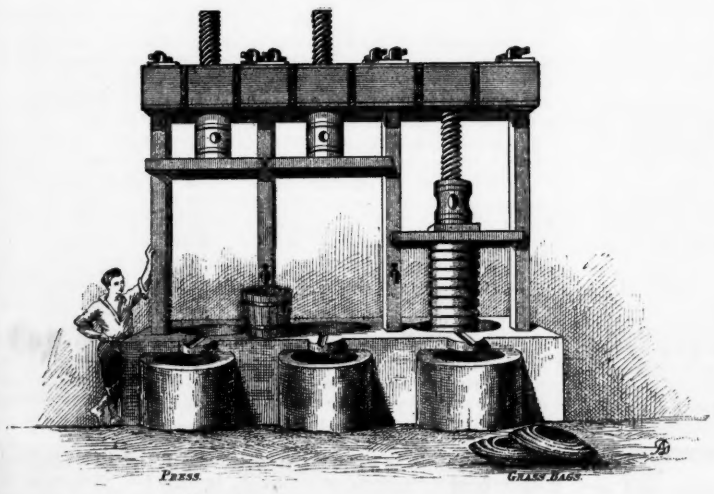
The olive seems to lose no oil until the humidity is taken out; but water, hot or cold, or, still better, oil, must be added to olives too dry, to cause their oil to flow.

The mill in use to-day to crush the olives differs little from those used for centuries.

I visited one near Nice early in November, when the crop was just beginning to arrive; the olives were poured into an enormous stone bowl, from the centre of which rose a large wooden shaft crowned with a large wheel; in the rim of the wheel, pointed downward and regularly spaced, were strong oak pegs for cogs; these met similar pegs or cogs in the power wheel, which was turned slowly by an overshot water wheel; attached to the upright shaft, forming an acute angle with its lower end, was a large millstone exactly the shape of a large grindstone, the edge bevelled to match the slightly concave bottom of the great bowl; from the side of the upright shaft, opposite to the great millstone, on the end of a short horizontal shaft, was a scraper which fitted the inner side of the bowl. When the mill starts, the olives in the bottom of the bowl are crushed by the stone, those forced up the inner sides of the bowl as the great stone revolves are scraped off and drop back under the stone until the mass is reduced to an oily paste. This paste, shovelled out, was packed into flattish-round woven-grass bags, which were taken to the presses; these are simply rough, heavy frames fitted with large screw presses worked by hand. The bags are piled up in single piles, like so many cheeses, on the wide oak slab forming the bottom of the frame; the presses are screwed down upon them with a hand bar, exactly as our house-raising jacks are screwed up. The oil drains into tubs placed to receive it, when boiling water is poured over the bags to help the flow and joins the oil in the tub; the oil rising to the surface of the water is skimmed off with very large tin skimmers.



MILL. BAGS OF GRASS FOR THE PRESS.



PRESS. GRASS BAGS.

Mr. Brullé, director of the agronomic station at Nice, has invented a mill which, as it crushes the pulp, extracts the stone and throws it out; this allows, according to Mr. Brullé and other authorities, the oil of the pulp, the true virgin oil, to be obtained from the press without any mixture of that from the stone or kernel.

The people of these warm, olive-raising countries are slow to adopt new ideas, so Mr. Brullé will have to wait some time before seeing his new labor-saving (to say the least) invention supersede the clumsy, old-fashioned methods which are used now because the ancestors of the people used them.

Virgin Oil.—Many people talk about virgin oil, but such a thing cannot be found by the ordinary consumer. It requires so much care and attention to prepare this oil that it is only to be found in the house of a farmer who has a mill and prepares this oil for his own use.

Olives are taken when only three-quarters ripe; these are all selected free from any blemish. They are taken, immediately after they are gathered, to the mill, where they are but slightly crushed, so that the pulp alone

comes in contact with the millstone; the seed must not be touched, for, though the kernel contains a certain quantity of oil, it is, as connoisseurs know, rather acid and has not as fine a taste as the oil from the pulp.

This pulp having been crushed without the addition of water, either hot or cold, is gathered in a heap, the centre of which is made hollow in the shape of a funnel.

The oil flows by itself from the inner sides into the centre of the reservoir, from which it is taken with a large ladle.

The oil so prepared is greenish in color, its perfume is exquisite, and it can be kept for many years.

First-Quality Oil.—For oil of the first quality, called "cannon oil," the olives are placed in the mill without addition of water, if the fruit is freshly gathered. The oily paste is placed in bags made of clean esparto and submitted to the press.

In mills with more modern improvements hydraulic presses are used.

Second Quality Oil.—To obtain oil of the second quality, and in order to extract from the pulp all the oil which it contains, they throw the contents of the bags into a vat which is full of cold or warm water; the whole is well stirred up, the broken fragments of the seeds fall to the bottom, while the pulp floats; this is gathered and replaced under the press.

Some pour boiling water over the bags the first time they are put under the press; this simplifies the labor, greatly increases the yield, but reduces the quality.

After all the usual means of extracting oil from the pulp have been employed, 10 per cent of oil can still be obtained by using bisulphide of carbon.

Oil Yield.—The best oil is undoubtedly obtained from olives not fully ripe, for too ripe fruit gives oil which is heavy and without perfume.

Risso says that 100 Kgm. of sufficiently ripe and sound olives ought, in a good year, to yield 20 Kgm. of good oil and 4 Kgm. of inferior quality, and in bad years only 10 of good oil and 2 of inferior.

Olive Refuse.—After the oil is extracted the skins and refuse are employed in heating boilers, the muddy substance found at the bottom of the most inferior quality of oil is used as a manure, and, last of all, the broken stones, or "grignons," make a very excellent fuel, which has the advantage of not giving off any carbonic acid gas, as charcoal does.

Fraud is found in the oil mills, as everywhere else. Should the olives be mouldy, which often happens when they have been gathered or kept in bad condition, the bad taste is hidden by adding leaves of wild olive trees to the pulp.

Others even go so far as to throw seed oils over the pulp while it is being ground, so as to get a perfect blending with the new oil.

Keeping Oil.—To keep oil in good condition needs great care and attention; the clear oil ought to be separated from the turbid at once, for the longer the oil remains on the lees the more apt it is to contract a rancid or a bad odor. When the oil has been decanted several times, as needs may be, filtered through dry mass, carded cotton, sand, plaster, charcoal, etc., it must be stored in a place which is sheltered both in summer from the heat and in winter from the cold.

Restoration.—Oil must be kept in vessels which close tightly and are made of a substance on which oil has no action. These precautions are indispensable, for the effect of the air on oils is too well known not to be guarded against; they absorb oxygen very rapidly, and soon reach a condition which renders them unfit for food. They can be restored nearly to their original state by warming them, with the addition of alcohol, and washing them afterward, but they become much paler in color, without any strong taste or odor.

Lime water in equal proportions can also be used, or 25 Cgm. of caustic potash per kilogramme of oil.

Chloride of Zinc for Perspiration of the Feet.—Dr. Wincgradoff advises the application of a 5-per-cent solution after washing the feet with tepid water. The solution may be applied with a sponge, and should be washed off after a few minutes.

McFERRAN'S COMPRESSED TABLET MACHINE.

THIS machine is very popular in England, and largely employed by the principal firms making compressed tablets. It is made in four different sizes, the smallest being worked by hand power, but the others are all adapted for steam power. The machine illustrated herewith (page 199) weighs about 2¼ cwt., and is capable of turning out from 60 to 120 tablets a minute. By the adoption of different punches and dies it is possible to make the tiny hypodermic tablet of one-sixteenth of an inch diameter or the lozenge of three-fourths of an inch. It is particularly suitable for making quinine tablets and compressed tablets generally. Automatic cleansers are supplied, whilst the time occupied in changing the dies from one set to another is barely over a minute. The largest machine of this class weighs half a ton, the turret carrying four dies which may be either simple or multiple; if the latter, 4 tablets are made with each impression, and the machine will produce 300 tablets per minute. The price varies from $150 to $650, according to size, that given in the illustration being offered at $275. The makers are Messrs. Holroyd & Co., Tomlinson St. (works, Hulme, Manchester, England), and the machine is known as McFerran's patent.

Supplemental Notes to Lloyd's Process of Alkaloidal Assay.

PROFESSOR J. U. LLOYD'S method of assaying alkaloidal drugs and preparations, which formed the subject of a paper read by him at the recent meeting of the American Pharmaceutical Association at New Orleans, and published in this journal for May 1st, has deservedly attracted very wide attention. The author has had many inquiries since reading the paper, and has decided to present to the Ohio Pharmaceutical Association, at its annual meeting, an additional paper embracing both the original as it was read at New Orleans and also the remarks made by the author in the course of the discussion following its reading, together with such additional notes as seem to be of general importance to correspondents.

The author says that the scheme of assay was suggested as a generalization, not as a process perfected and closed as to details. It was intended to form the basis of experiments for comparison with other methods, the ultimate result perhaps being a new and short method for assaying most alkaloidal liquids.

Preliminary reports from those who have tried it and are interested in such work, lead the author to believe that the suggestions offered will be useful and more valuable than was originally expected.

We now quote from Professor Lloyd's new paper (presented to the Ohio Pharmaceutical Association):

NOTES.—If a fluid extract is made by means of strong alcohol, the soda magma may not separate clearly when the chloroform is triturated therewith. The difficulty is best overcome by evaporating the alcohol, or by the addition of two (2) C.c. of water, which should be added to the contents of the mortar after the solution of ferric chloride has been mixed with the fluid extract. If the fluid extract is made with diluted alcohol, the chloroform will separate sharply and clear, and the addition of water is unnecessary.

If the fluid extract contain volatile oils, they will in part continue with the alkaloid and reach the final chloroform, unless the ether-modification process suggested for chlorophyll-yielding drugs be adopted. This washing with ether is therefore necessary with drugs in which alkaloids are associated with volatile oils.

If an alkaloid is volatile, it must be fixed in the final chloroform by means of an acid, before the chloroform is evaporated. Then calculate the alkaloid from the resultant salt.

It is necessary that bicarbonate of sodium be added in quantity sufficient to form a *stiff dough magma*. The inexperienced operator is inclined to use it too sparingly, the result being that much of the chloroform is taken into the mass instead of separating therefrom.

Rotate by giving the liquids a circulatory motion, thus

grinding the ever-changing surfaces together. The object, *changing surface contact*, is best accomplished by preserving clear surfaces and rapid rotation. If the liquids be *shaken together*, globules form enclosing masses of unchanging solution, the result being an emulsion, and should be avoided. By attention to the rotation principle the operator will quickly deplete the liquid, that has least solvent power, of the alkaloid.

The preferable rotator (separating funnel) is the globular, stoppered, and with stopcock. For assay determinations by my process the eight (8) ounce rotator is best; it should not be smaller. The pear-shaped (Squibb) pattern is better adapted for quiescent separation of different liquids, but is, in my experience, a defective rotator, and I do not use it for rotating. I have taken the liberty to apply the term *rotator* to the globular pattern and *separator* to the pear-shaped pattern to distinguish them.

A small addition (2 to 5 C.c. to chloroform 100 C.c.) ammoniated chloroform in some cases forms a better solvent and will abstract the alkaloid from the soda magma more rapidly than neutral chloroform.

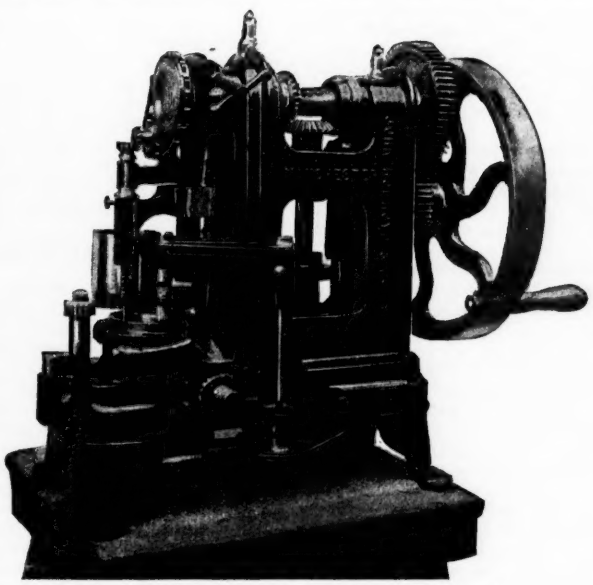
FORMULA FOR AMMONIATED CHLOROFORM :

Chloroform.....96 parts, by measure.
Stronger ammonia..... 4 " " "

Mix them well together, and after separation draw the chloroform from beneath. If used in large amounts it may produce a jelly with the soda magma.

In some cases the residual alkaloid assumes a yellow color during evaporation of the chloroform. This will be observed with emetine and bases that are affected by heat and ammonia. In some cases traces of accompanying coloring matters intensify the coloration, without however appreciably affecting the weight of the crude alkaloid.

Constant weight is quickly attained at a temperature of 100° C., if the alkaloid be in thin layer. It should never, therefore, occupy depth sufficient to permit the formation of a skin over the surface, and for this reason it is best to evaporate the chloroform in shallow, watch-glass-shaped dishes.



McFerran's Compressed Tablet Machine. (See page 198.)

Most alkaloids separate amorphous from rapidly evaporated chloroform, and they are often very hygroscopic. In consequence they must be weighed quickly after reaching a constant weight, and even during the act of weighing, unless protected from moist air, will become appreciably heavier. For this reason it is well to clamp a cover glass over the alkaloid as soon as it is dry.

If the operator prefer, he can evaporate the chloroform after extracting the soda magma, exhaust the residue with the acidulated water, and either titrate the acid solution, or make it alkaline and abstract the alkaloid with chloroform and weigh it. I often use this method, and it hastens the process.

Care should be exercised to prevent any of the alkaline water solution from following the final chloroform. It is best to draw these last chloroform fractions into a dry separator and then separate again, drawing the chloroform into the evaporating dish. If any of the water solution passes into the evaporator it will contaminate the alkaloid with ammonium sulphate. Under these conditions, weigh the crude alkaloid, wash the dish well with chloroform, dry it, and weigh it again. The difference will be the amount of alkaloid.

Owing to the insolubility of morphine, the method cannot be applied to the estimation of that alkaloid in opium preparations. Neither will it estimate the total alkaloids of hydrastis.

The following notes are of interest to many correspondents:

The fact that a menstruum may be an excellent solvent for an isolated alkaloid does not indicate that it is capable of breaking an alkaloid from its natural combination in a drug. Considerable energy is often necessary in order to liberate alkaloids in condition favorable to their abstraction by neutral solvents—a fact that is shown by the methods adopted in obtaining them on a large scale. For example, chloroform will not abstract all the caffeine from guarana or tea, and neutral solvents such as chloroform and ether will not abstract as completely as might be supposed the alkaloids of other drugs. Preliminary treatment of drugs with acids and alkalies is often necessary to the complete liberation of their alkaloids; and even then non-aqueous liquids are incapable of their perfect abstraction, and an aqueous menstruum is often best or even necessary to search the vegetable integuments thoroughly. It will be seen, therefore, that an assay process that may be applicable to alkaloidal *liquids* is not necessarily useful in assaying the *crude drug*, and a method that may give good results with alkaloidal fluid extracts may be of little value in abstracting the crude drugs from which they are made.

The foregoing remarks will indicate why I may not consider ferric hydroxide as the only active agent of my suggested method of examining alkaloidal liquids. It is, however, a very "potent" factor, and yet the preliminary action of the acid of the ferric chloride and subsequent action of the alkali of the sodium bicarbonate are influences that it seems to me should be considered in connection therewith.

Prof. Prescott writes me concerning my process, and I take the liberty to repeat his words, as they present a valuable suggestion:

"It does not surprise me, ferric hydrate has great powers. It never occurred to me to work with it in alkaloidal separation. Ferric hydrate is a great thing, and, please observe, FERROSO-ferric hydrate is still more potent."

I have not employed ferroso-ferric hydrate, and this agent is likely, as indicated by Professor Prescott, to prove superior to ferric hydroxide.

I have, however, met with good results by using a mixture of equal amounts of dry ferric hydroxide and sodium bicarbonate. Rub enough of the mixture into the fluid extract to form a stiff dough, then abstract with chloroform, and complete the assay as suggested previously. It is not improbable that this may serve a better purpose in some, or perhaps most, cases than the method I suggested at the New Orleans meeting.

Another variation, often very quickly performed, and based on the foregoing, is as follows:

Process of Assay.—Pour 5 C.c. of the fluid extract into a mortar and triturate into it enough of a mixture of dry ferric hydrate and sodium bicarbonate to form a thick dough magma. Exhaust this mass by trituration with successive mixtures of chloroform, first using 20 C.c. of the mixture and 10 C.c. afterward, decanting severally until 50 C.c. of menstruum are obtained. Pour about one-fourth of this chloroform solution into an evaporating basin on a water or steam bath, and as it evaporates add

the remainder (the object being to obtain the alkaloidal residue in small compass). Now pour diluted sulphuric acid (1 in 50) into the dish in amount sufficient to cover the alkaloidal residue in the dish, and continue the heat a few moments. Decant the acid solution, filtering it through a small paper. Wash the residue twice more in the same manner with diluted acid, filtering it through the same paper. (This excludes most impurities from the acid liquid.)

Titrate this acid liquid, if the operator prefer titration, with either Mayer's solution or other alkaloidal reagent. If not, make it alkaline with ammonia, pour it into an eight-ounce rotator, and abstract the alkaloid by abstracting it four times successively with 10 C.c. of chloroform. Evaporate the chloroform in a shallow dish and weigh the product. Its weight expressed in grammes and multiplied by 40 will show the alkaloidal percentage of the fluid extract.

It will be observed that while the scheme is simply a variation of the other process, it dispenses with the first series of rotations, and, if titration is employed, *dispenses with the rotator altogether.*

Solid extracts may be estimated after the process suggested for fluid extracts, but must first be brought to the condition of a syrupy liquid by trituration (preferably) with solution of ferric chloride. I use 1 Gm. of the solid extract, and 2 C.c. of solution ferric chloride previously diluted with its bulk of water. After a smooth cream is made by triturating them in a mortar, sufficient sodium bicarbonate is added to form a dough, which is then extracted with chloroform in the usual manner. The weight of the final alkaloidal residue must be multiplied by 100 (equivalent to moving the decimal point two figures to the right), which will give the alkaloidal percentage of the extract.

The operator must use the sodium bicarbonate in amount sufficient to form a tough mass, and thus prevent the formation of an emulsion. The mass in the mortar should part with most of the chloroform and not take it into its substance, and it will do so if of proper consistence.

In order to make sure that the alkaloidal abstraction is complete, it might be well always to triturate with chloroform until 50 C.c. of liquid *have been obtained*, using first 20 C.c. and afterward portions of 10 C.c. each (instead of using 50 C.c., as suggested in New Orleans). The smaller the amount of fluid extract (within reasonable limit) the better both for accuracy of result and economy of material. This is governed largely by the sensitiveness of the balance that is used in weighing the alkaloidal residue; if very sensitive, as small a quantity as 1 C.c. of highly alkaloidal drugs being preferable to larger quantities.

If the principle of assay suggested in this paper, either in part or as a whole, be found a desirable innovation on present methods, it is likely that particular processes will be devised and adapted to each preparation. My paper is designed as a generalization only, calling attention to classes which may, however, be again judiciously subdivided. The formulas adopted by the Committee of Revision of the Pharmacopœia will govern the details of the methods of assay.

Respectfully,

J. U. LLOYD.

Chloralamide Dangerous in Certain Kidney Affections—Dr. Robert Main calls attention to a danger that may possibly attend the administration of chloralamide in cases where the kidneys are affected so as to interfere with its free excretion from the system (*Brit. Med. Journ.*, May 23d, 1123). In the case of a patient eighty years of age, with granular kidneys and a dilated heart, a 30-grain dose of chloralamide has always produced refreshing sleep and a sense of well being, without headache in the morning; it has also apparently abolished the desire to micturate in the night. But on each morning after the chloralamide has been taken there has been profuse epistaxis, and a great deal of congestion of face and neck on the following day.—*Pharm. Journ.*

Iron, and especially Blaud's Pill, as a Remedy.

DR. T. CLIFFORD ALLBUTT writes to the *British Medical Journal* concerning the use of iron as a remedy as follows: "In his interesting articles on anæmia, Dr. Stephen Mackenzie discusses with some care and anxiety the proportions of alkali to be combined with sulphate of iron in Blaud's pill. Let me assure Dr. Mackenzie and your readers that these proportions are of no importance whatever, and that the alkali may be omitted without therapeutical loss and with much practical convenience.

"For the last five years of my practice I ceased entirely to use the alkali, and my results were equally good. The mistakes and failures in treating adolescent and chlorotic anæmias are often due to the prevailing economy in the use of the iron. With 5 or even 10-grain doses of citrate of iron little real progress may be made in many cases. No form of iron is so efficient as the sulphate, of which gr. i. thrice daily is to be given for a week, then 2-grain doses for ten days, and so on till 9, or even 12, grains are taken in the day. The drug should be gradually reduced in like manner, and the course should never be less than three months in duration, or relapses may occur. In obstinate cases the addition of one-thirtieth grain of strychnine, or one-quarter grain of phosphide of zinc, is a valuable aid. Most patients require the inclusion of one-third to one-fourth grain of extract of aloes to prevent the constipating effect of the sulphate, but Dr. Mackenzie rightly denies that constipation is the cause of chlorosis, or even generally coincident with it. This error is due to reasoning from an insufficient number of careful records.

"Iron pills should be carefully made from the dried sulphate, and not with gums, which by hardening make the pills insoluble. In any case it is better to order the pills to be freshly made every week, if not even more frequently. Patients who are unable to take pills are best treated with the saccharated carbonate of iron, of which three or four large teaspoonfuls may be given in the day."

A Possible Cure for Cancer.

ABOUT two years ago Dr. Mortimer Granville told the *Lancet* of a method of treating cancer which he believed to be likely to prove useful, and now, as the result of experience to this date, he is able to say, 1, that none of the earlier cases have relapsed; 2, that scirrhous tumors of a large size and undoubted authenticity have gradually disappeared without any operative interference; 3, that the health of patients has improved under treatment, and the cachexia vanished.

The method of treatment was, we may state, the combined use of thalline and papayin; but Dr. Granville now uses, instead of thalline, a periodo-hydromethyloxychinolin (an iodo-derivative of antipyrin), because that is better borne and seems to be more effective than thalline. He either anoints or injects the tumor with a papayin specially prepared, as he has reason to believe that it is not the proteid elements but the organized ferment of the papaw juice that produces the effects observed.

At present Dr. Granville does not explain why this method of treatment is effectual, for its scientific aspects are still under investigation.—After *Chem. and Drugg.*

The Nickel Carbon Monoxide which Mr. Ludwig Mond discovered some time ago has been found by Professor McKendrick, of Glasgow, to be intensely poisonous, and, when present in the atmosphere to the extent of one-half per cent, to prove fatal to animal life. When injected subcutaneously, even in very minute quantity, it acts as a respiratory poison, giving rise to symptoms similar to those produced in carbonic oxide poisoning. Its properties generally indicate that, when a means has been found of properly diluting it, it may be used as an antipyretic, since it is capable of depressing the temperature of the body very considerably, and for a long time. Messrs. McKendrick and Snodgrass propose the short name "nico" for the compound. If a suitable solvent can be found for it, it is expected that it will find some use in medicine.—After *Ph. Journ.* and *Chem. and Drugg.*

Aristol—Its Therapeutic Uses.

DANIEL LEWIS, M.D., publishes in the *Medical Record* of June 6th a summary of his experience in the use of aristol:

The powder, without admixture, applied to an ulcer attended with copious and offensive discharge, promptly abolished the odor and checked the discharge within twenty-four hours. It favors the formation of a scab, when healing by this process is indicated. For application to ulceration of the cervix uteri it can be readily applied by means of a cotton tampon smeared with vaseline, to which the powder will adhere. Such cases as were attended with induration, thickening, and suppuration were all promptly improved.

Aristol and iodol in equal parts, applied by means of a speculum and powder-blower to similar conditions, and retained in position with tampons of cotton, were also convenient and efficacious. The same mixture applied twice daily in cases of chronic nasal catarrh, when the discharge was profuse or fetid, caused marked and permanent improvement without irritation.

Ointment of aristol with petrolatum or cold cream was useful in skin affections having a tendency to form pus, or in which mild stimulation was wanted. For fresh wounds, as well as for the foregoing, a larger proportion than four to thirty will be requisite.

Moist gauze of aristol, dusted with the powder, is more desirable as a surgical dressing.

Solution in liquid petrolates, *e.g.*, "albolene" or "benzoinol," is a satisfactory application when a moist dressing is advisable, and is sometimes available as a vaginal or uterine application.

Flexible collodion with aristol is said by the writer to be one of the most valuable of its preparations. With it abrasions of the skin may be covered. Excessive perspiration of the hands was relieved by it after a short period of use. Erysipelas in its early stages, coated with this preparation, was, in several instances mentioned, shortened in duration, the writer declaring it to have been more effective than anything he has ever employed—not excepting white lead paint, which Mr. Barwell, of London, has found so useful.

A Combination of Iodine with Glucose.

F. P. MANN, M.D., of San Francisco, Cal., is the authority for the following:

The remedial value of iodine is well known. But it is also a fact that full doses cannot be administered internally except in the form of iodide of potassium. As a rule, in the various forms of disease to which free iodine is applicable any combination having an alkaline base is not desirable. In order to secure the specific action of a remedy adapted to relieve chronic disorders—and it is to this class of diseases that iodine is chiefly applicable—it is important that it should be to a certain extent cumulative and retained in the circulating blood for a sufficient length of time to exert its specific action upon diseased tissues. In glucose we have an agent capable of absorbing, or rather of occluding, free iodine so that this metalloid cannot be detected by either odor or taste, and thus combined can be administered in much larger doses than formerly employed without producing unpleasant symptoms. Another advantage in giving iodine occluded by glucose is found in the fact that as this substance occurs normally in the contents of the small intestine, in the chyle after the use of amylaceous and saccharine food, in the blood of the hepatic veins, and in the tissue of the liver in the form of glycogen, it is probable that glucose in thus occluding free iodine is itself protected from chemical change during the process of digestion by the antifermentative quality of the latter, and hence may be readily absorbed into the circulation, carrying in its embrace the iodine to be liberated during the morphological changes that occur prior to the formation of new blood corpuscles. In the formula, 30 grains of iodine are dissolved in 4 ounces of water by means of 150 grains of potassium iodide; to this solution are added 12 ounces of syrup as prepared by the sugar refineries and sold by grocers under the name of golden syrup, or sugar-house syrup or molasses. This syrup contains glucose in combination with organic matter, and answers the purpose quite as well as glucose manufactured from starch by the action of sulphuric acid, or other glucosides furnishing this substance in an isomeric form. The exact formula as above should be given to the druggist with special direction that simple syrup must not be substituted; this, containing entirely crystallizable sugar, will not take up the iodine, and the result will be a strong solution of iodine, which cannot be taken without serious inconvenience. To avoid mistake, I direct as follows:

℞ Iodinii	ʒ ss.
Potass Iodidi	ʒ ijss.
Aquæ Puræ	ʒ iv.
Syrup. Fuscus	ʒ xij.
Ess. Gaultheriæ	ʒ ij.

M. Fiat. sol. Sig.: Take teaspoonful between each meal with a little water. (Syrupus simplex must not be used.)

I have succeeded in producing the most satisfactory, I may say remarkable, results where potassium iodide, Lugol's solution, and Syrup. ferri iodidi had signally failed. It is better, in prescribing this formula, to advise commencing the use of the medicine the day following that on which it is ordered, as some hours, about six to ten, are required in which to completely occlude the free iodine. I do not know the exact limit of this occlusion, but, if desired, a much larger proportion of iodine can be used than already named, and still remain odorless and tasteless so far as free iodine is concerned; though where a stronger combination is employed it would be advisable to commence with a smaller dose and increase it gradually.—*Medical Record.*

FIG. 1.

SIMPLE METHOD OF DETERMINING THE BOILING POINT OF LIQUIDS.

A MOST simple and ingenious method of taking the boiling point of many liquids has been recently described by A. Schleiermacher in the *Berichte* (1891, 944). The principle upon which it is based is the following physical theorem:

"The boiling point of a liquid is that temperature at which the tension of its vapor, in a space saturated with the latter, is equal to the atmospheric pressure."

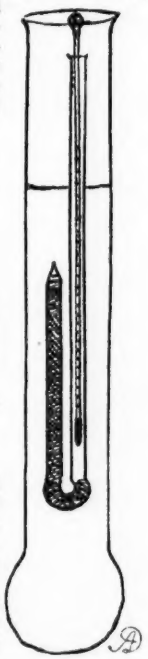


FIG. 2.

This principle has, indeed, been made use of for this purpose heretofore, but no general use was made for it.

The substances, the boiling points of which are to be determined by the method presently to be described, must have the following properties:

1. They may be liquid or solid, but their vapor must remain undecomposed by mercury at their boiling point.

2. Their boiling point must not be so high that the tension of the mercurial vapor itself would vitiate the results. The author states that no such influence has been noticed even up to 300° C.

3. Moreover, there are some other conditions necessary to be fulfilled, viz.:

4. The substance must be pure.

5. A correct thermometer must be used, of course.

6. Enough of the substance must be employed to have the space intended for the vapor filled with the latter, and to have some of the substance itself left unvaporized. It is only when this latter is the case that the operator knows the space occupied by the vapor to be "saturated" with the latter.

In general, the operation is as follows:

The substance to be operated upon is introduced into one arm of a U-tube, the orifice of which is closed by fusion, and the same arm is completely filled with mercury. The open branch is left empty except near the bottom,

where the mercurial column must reach to the top of the bend to prevent access of air to the other branch. A thermometer is now placed in the open branch, the U-tube immersed in a suitable liquid, and the latter heated until the vapor produced by the substance has depressed the mercury in the closed branch, so that the level in both branches is exactly alike. The temperature is then read off, and this is the boiling point.

The manner of filling and preparing the U-tube is as follows:

A piece of tubing about 20 inches long and 6 to 8 Mm. wide (wide enough to permit the easy insertion of a thermometer) is drawn out at one end to a fine capillary tube, as shown in Fig. 1. The tube is then bent to a U-tube, the open end being left much longer (see Fig. 2). Next the substance is introduced into the short branch, and the latter completely filled with mercury. In order to expel all traces of air, the substance (liquid or solid) on the top of the mercury in the short branch is cautiously brought to a boil, the vapor escaping through the capillary tube; and while this thus escapes, the capillary tube is quickly closed by fusion. There may remain a *minute* bubble of air or gas, which is too insignificant to be of any influence. Before beginning the actual experiment, the excess of mercury in the open branch—down to where the bend begins—must be poured out. This is done by gradually inclining the tube over horizontally, the short or closed branch being held *below* the longer or open one.

Next a thermometer is inserted, as shown in the cut, into the open branch, and the U-tube immersed in a suitable liquid. For substances boiling below 100° C. water is used; for others with higher boiling points, paraffin or sulphuric acid. The bend of the U-tube should be about 10 Cm. from the bottom of the outer vessel, and the closed end of the short arm about 5 Cm. below the level of the liquid. Everything being properly adjusted and supported, heat is very gently applied, so that the mercury in the closed arm sinks very slowly. When both mercury columns are at an exact level, the thermometer is read, and gives the boiling point at the barometric pressure then existing.

If the pressure is not normal, that is, not 760 Mm., the true boiling point may be found from the observed by calculation, or more easily by allowing the level of the two columns to vary by a proportionate amount. For instance, supposing the barometric pressure of the air were 750 Mm., all that would be necessary would be to allow the mercury in the open branch to rise 10 Mm. higher than in the closed one, and then to read off the temperature. This measurement may be made easily by the eye or by a self-made scale, since great accuracy is not usually required.

The most exact results are obtained by allowing the mercury column in the outer leg alternately to rise and to fall below the level in the other, and to read off the temperature each time when the levels become alike. The mean of the observations is then taken.

It is evident that this way of determining boiling points is a most convenient one. It is particularly valuable when only minute portions of the substance are available.

If a tube of the size above described is used, the available space for the vapor is about 2 Cm. Of water, only about 2 Mgm. would, therefore, be required to determine its boiling point. It should not be forgotten that there must always be an excess of the substance.

The tube must be perfectly free from moisture, and the mercury should be pure.

When determining the boiling point of water, the author found a solution of common salt to be preferable to paraffin. Owing to the high heat of vaporization of the water, as compared with the specific heat of paraffin, the different successive determinations were rather far apart.

The examples given by the author show that this method gives exceedingly close and correct results:

Carbon disulphide, mean of 6 determinations (46.4 to 47.1)	46.8° C.
Toluol (109.9–110.6)	mean 110.3° C.
Amylic alcohol (129.9–130.3)	mean 130.2° C.
Aniline (181.5–181.9)	mean 181.7° C.
Naphthalin (214.6–215.5)	mean 214.9° C.

Lard and its Adulterations.

DIETERICH, in the last issue of the *Helfenberger Annalen*, remarks that the melting point of pure lard, as given by the last German Pharmacopœia, viz., between 36° and 42° C., can be relied upon as a criterion only when the method by which it is determined is also given, since the same fat will show different melting points according to the method used. Dieterich determines the melting point by enclosing the fat in a glass tube open at both ends, which is immersed (vertically) in water. The temperature at which the fat rises in the tube is taken as melting point.

According to Dieterich the melting point of lard tried out by himself varied between 40° and 43° C.; of lard bought in the market, 38° and 44° C. Hübl's iodine number, in the case of the former, was between 51 and 58.9; in the latter, between 50.7 and 62.9.

The German Pharmacopœia gives no test showing the absence of foreign fats. Dieterich thinks that Hübl's iodine test ("iodine number") is a very valuable criterion. He has also examined the various processes recommended in recent times for the detection of cottonseed oil in lard, but does not find any of them reliable.

Special attention is called to the fact that Becchi's silver test and Labiche's acetate of lead reaction, although valuable when applied to lard adulterated with unheated cottonseed oil, *fail to give any reaction* if the cottonseed oil had, previous to its admixture with the lard, been brought to a temperature at which it emitted fumes for one or two minutes. Lard adulterated with oil of this kind does not respond to the taste. And it is quite likely that lard manipulators already know this fact and work accordingly.

Concerning "Wiesbaden Elixir" and Aloes.

JOHN AULDE, M.D., of Philadelphia, in the *Medical Record* of June 6th, says:

Referring to my paper on aloes which appeared in the issue of the *Medical Record* for December 6th, 1890, I beg leave to correct the formula for the "Wiesbaden Elixir," which, owing to the absence of the original, I gave from memory, expecting to make the necessary corrections when proof came to hand. Unfortunately the matter was overlooked, and the formula, as published, is defective. I am prompted to make this statement because of the numerous applications I have had from manufacturing chemists to have me approve of the pills, capsules, etc., which they had taken the trouble to prepare for the purpose of supplying physicians with this product. The original formula, as written by the Wiesbaden physician, is as follows:

℞. Spanish Saffron	gr. xx.
Socotrine Aloes	℥ i.
Boletis Laricis	ʒ i.
Powdered Myrrh	ʒ iss.
Powdered Rhubarb, Powdered Angelica Root, Zedoary Root, Gentian Root, Calamus Root	āā ʒ ij.
Brandy	♁ ij.

M. Sig.: Eight or nine drops to be taken half an hour after meals, on sugar, or mixed with a little brandy or wine. Cold water must not be taken soon after the medicine.

At the time this formula was published I suggested that it would be convenient to have it dispensed with a little glycerin, because water causes a precipitate. A little wine may be substituted, unless there be objections from a moral standpoint, but I think this can be effectually met by having the product evaporated and presented in the form of a mass, either in pill or capsule, or it might be enclosed in wafers to suit the taste of the patient. I beg leave to say in this connection that the remedy is very much improved by age, and it will be found in practice that stock six months old or more will be more satisfactory than that which has been freshly prepared. For all practical purposes, both the saffron and myrrh may be omitted, and if the product is put up in the form of a solution the elimination of these ingredients adds greatly

to its appearance. It will be superfluous for me to add any suggestions in regard to the care which should be exercised in selecting the different drugs included in this combination, and it will not be necessary to point out the need for the most thorough and long-continued maceration in order to secure the active principles together with the peculiar aroma characteristic of this excellent preparation. Instead of brandy, I think diluted alcohol would answer the purpose quite as well when the product is intended for use in the solid or semi-solid form; but when it is to be used in the form of a liquid, I much prefer the brandy; it can then be given alone or in combination with a simple tincture, as gentian, calamus, or cinchona.

It will be observed that aloes is the only active purgative remedy, the other ingredients in the doses used being principally carminatives, and, as the dose of aloes is sufficiently large, I hope no one will so improve upon the original as to substitute purified aloes, or aloin, the active principle. There can be no doubt, in the minds of practitioners familiar with the facts, that irreparable injury attends the attempts on the part of physicians and the laity to secure active purgative effects from the continued use of aloes, and I repeat here what I hinted at in the paper referred to, that many a case of Bright's became possible only through the abuse of aloes or other similar purgative. When it is stated that the now popular pill containing aloes, strychnine, and belladonna is made by manufacturing chemists, who are not supposed to be doing a very extensive business, in lots of one million at a time, we can have some conception of the immense number of these that are yearly consumed. While admitting that the combination is efficient, the marked increase within the past few years of kidney troubles seems to be in close relation with the popularity of the pills referred to, and I hope the medical profession will take the necessary steps to arrest this demoralization and put a stop to the destruction which unwise medication is producing.

Another suggestion might be added, viz.: that the Wiesbaden elixir in the form of a bolus could be advantageously combined with oxgall, which, as is well known, has a favorable effect when exhibited in combination with aloes. Oxgall, moreover, supplies an artificial antiseptic, assists in the digestion of fats and starchy food products, and thus serves to prevent the formation of poisonous products in the intestine. I have no doubt but that a combination of this character would be found useful in a very large number of cases where aloes is indicated, and think it is but a question of time when a combination of this nature will take the place of aloin, strychnine, and belladonna.

Chloroform Purified by Cold.

THE artificial production of cold is about to be practically applied by M. Pictet, under a patent, in the purification by congelation of various liquids, and amongst others chloroform. It is stated that when the temperature of the purest brands of commercial chloroform is lowered to —70° C., partial crystallization takes place. If the crystals be removed and the refrigeration increased, at a temperature below —100° C. the chloroform itself crystallizes out, and can be removed from a residuary impure fraction. The chloroform so purified is described as being, at a temperature of 15° C., a clear liquid of specific gravity 1.510, which can be preserved unaltered for an indefinite time, even in daylight, in white bottles and without any addition of alcohol. Upon shaking it with concentrated sulphuric acid, no coloration of the latter occurs, even after a long time. When shaken with chromic acid mixture no reduction takes place, the mixture remaining yellow.—*Pharm. Journ.*

Adulterated Carmine.—Attention is called in Germany to the fact that there is a carmine on the market which is labelled "Karmin, ordinär," and which is a mixture of lead eosin, china clay, and lead sulphate. It is only partially soluble in solution of ammonia, and the solution is strongly fluorescent. Another kind is labelled "Karmin, antik." It has a very beautiful appearance, and as the greater part of it is soluble in ammonia, it may be taken as genuine by some. It is a mixture of baryta and red corallin.—*Chem. and Drugg.*

MUCILAGE BOTTLES.

A MUCILAGE bottle which prevents evaporation, and overcharging of the brush, is suggested by a writer in the *Bulletin of Pharmacy* and illustrated herewith (Fig. 1). A description is hardly requisite. We have to suggest a modification of the brush handle, as shown in Fig. 2, and which consists in the use of a weighted thimble for a cap. Tinfoil or lead enough to fill about half of a cheap thimble is first packed about the handle and the whole held in place by a layer of sealing wax. Such an arrangement will enable the gum brush to be laid on the table without the brush touching, the taper of the thimble raising it well above the horizontal. By filing a hole near the bottom of the glass tube, the mucilage will rise to that point only, even when the bottle is full, so that the brush will always take up the same amount. The relative size of the tube is better shown in Fig. 1.

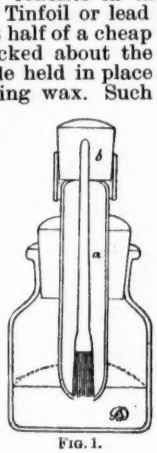


FIG. 1.

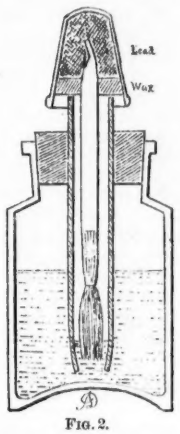


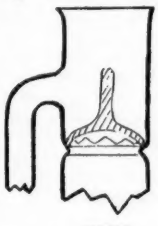
FIG. 2.

AN IMPROVED EXTRACTOR.

MESSRS. W. L. GADD and S. LEES have devised a simple modification of the ordinary Soxhlet tube for fat extraction, when used for extracting very light or finely-powdered substances, which gives excellent results in their hands, and which, they believe, may be of service to other chemists under similar circumstances.

The samples under examination were very fine, floury deposits, which, when agitated even slightly with the ether employed for their extraction, were thrown up into suspension and subsided again only very slowly; and one sample was so light that great care was necessary in handling the weighed quantities, as a slight motion was sufficient to cause clouds of dust to arise from the substance.

As the samples, when treated with ether, passed entirely through both glass and cotton-wool plugs placed at the bottom of the Soxhlet tube, the weighed quantity for each estimation was carefully placed in an ordinary star filter, previously extracted with ether, and the filter and its contents pushed down the tube until it rested on the plug of glass wool at the bottom.


SECTION

The modified tube used was specially made with an annular projecting inside ring, on which rested an inverted glass cup, provided with a short stem to facilitate removal, and having cut in its periphery a number of channels or grooves.

PLAN

The down rush of ether from the condenser, when the siphoning action took place, was received by this glass cup, and, passing through the channels mentioned, flowed quietly down the sides of the tube without in the least disturbing the material in filter, which was rapidly and thoroughly extracted without any of the powder passing into the tared flask; whilst previous attempts to use the ordinary extractor had resulted in the whole of the material being speedily washed out of the filter and finding its way into the weighed flask.

The authors have repeatedly used their modified tube for extracting a variety of substances, with very satisfactory results, and they believe it can be made without adding materially to the cost of the ordinary Soxhlet extractor.—After *Chem. News.*

Assay of Cinchona.

THE following method of assay of cinchona bark, which presents a few features, not new in themselves, but apparently combined with judgment, has recently been proposed by W. Haubensak (in *Schweiz. Wochensch. f. Pharm.*, 1891, 147).

Place 20 Gm. of cinchona bark in very fine powder into a flask of the capacity of ½ liter (1 pint), add 10 C.c. of water of ammonia (specific gravity 0.960) and 20 C.c. of 94-per-cent alcohol, shake thoroughly, and then add 170 C.c. of ether. Agitate repeatedly during two or three hours, then pour off 100 C.c. of the clear liquid [which represents 10 Gm. of bark] into a flask or, better, separator, containing 50 C.c. of water and 2 C.c. of diluted sulphuric acid (specific gravity 1.117). The quantity of the acid must, in some cases, be increased. It should be so adjusted that when the mixture has been thoroughly agitated, and all the alkaloids have passed over into the aqueous layer as sulphates, the latter will still have an *acid reaction*. Separate the acid, aqueous solution of the alkaloidal sulphates (which has a yellowish tint) from the ethereal layer, warm it gently so as to dissipate the ether still retained by it, and return it to the previously cleaned or to a new separator. Add 30 C.c. of chloroform, then a few drops of solution of soda, sufficient to separate the alkaloids, and shake for some minutes. When the chloroform layer is clear, draw it off into a dry, carefully tared flask, and repeat the extraction of the residuary liquid in the separator, by means of 20 C.c. of chloroform, as long as any alkaloid is shown to be present. This is best ascertained by removing a few drops, acidulating, and testing with iodized solution of iodide of potassium or with Mayer's solution. When either of these no longer produces a precipitate, all alkaloids may be regarded as removed.

The chloroformic solution is evaporated, or the chloroform distilled off, and the residue dried at 100° C. to constant weight. This residue is usually of a yellowish-brown to brown tint, according to the kind of bark it was obtained from, but is soluble completely to a clear liquid in acidulated water.

Eucalyptus Oil in Treatment of Scarlatina.

DR. C. K. BOND, a resident medical officer in a Liverpool fever hospital, has a letter in the *Lancet* of June 6th, giving his experience with the use of eucalyptus oil in forty-seven consecutive cases of scarlet fever (for which it has been recommended). The conclusion arrived at from a consideration of these cases is that, as a curative agent, it possesses no value; that it neither mitigates the severity nor modifies the course of the disease; that it fails to prevent serious complications and sequelæ arising in due course, and that as an auxiliary to the ordinary methods of treatment it possesses no obvious advantage.

Preparation of Museum Specimens.

DR. R. THOMA, of Dorpat, recommends a method for retaining the natural color of anatomical and pathological materials: After slight washing with water they are to be placed in one or the other of the two solutions made as follows:

	A.	B.
Crystallized Sulphate of Sodium	100 Gm.	60 Gm.
Chloride of Sodium	100 "	100 "
Chlorate of Potassium	100 "	30 "
Nitrate of Potassium	10 "	10 "
Water	to 1 liter	1 liter.

After immersion for eighteen to twenty-four hours the specimen is placed in alcohol, which requires changing once or twice only. In the case of large organs, such as a liver or spleen, it is best to immerse only a portion. These preparations retain their appearance for several months, the only notable change being the conversion of the red of hæmoglobulin into the browner tint of methæmoglobin. The structure is not rendered unfit for subsequent microscopical examination.—*Lancet*, from *Centralb. f. Allg. Path.*, etc.

BIBLIOGRAPHY.

MATERIA MEDICA AND THERAPEUTICS, with Especial Reference to the Clinical Application of Drugs. By JOHN V. SHOEMAKER, A.M., M.D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Medicine, and Clinical Professor of Diseases of the Skin, in the Medico-Chirurgical College of Philadelphia, etc., etc. Vol. II. of a Treatise on Materia Medica, Pharmacology, and Therapeutics. Being an Independent Volume upon Drugs. Philadelphia and London: F. A. Davis, 1891. Pp. 662, 8vo. Muslin, $3.50; leather, $4 50 net.

This new treatise is comprehensive, for it contains not only official articles, but also includes the remedies recently in vogue to an extent which is quite surprising, and describes drugs and preparations somewhat in disuse, but which are nevertheless of value and desirable. It is arranged alphabetically and with variations in size of type which facilitate ready reference. Under each title the subject has, as sub-titles, Preparations, Pharmacology, Physiological Action, Toxicology, Antidotes, Therapy, etc.; and in connection with the latter are a sufficient number of formulas to illustrate the customary or preferable modes of use. A separate chapter is devoted to formulas for hypodermatic use. There is a very complete table of minimum and maximum doses, and an index which nearly fills ten three-column pages of small type. An admirable feature is the insertion of foot notes giving references to other literature.

This is, in all respects, the most satisfactory text book on the subject in our language, and cannot fail to be the one in most general use in this country for some time to come.

VETERINARY COUNTER PRACTICE: A Treatise on the Diseases of Animals and the Most Suitable Remedies for them. Written expressly for Chemists and Druggists by Qualified and Experienced Members of the Royal Veterinary Colleges. London: *The Chemist and Druggist*, 42 Cannon St. Pp. 268, small 8vo. Muslin, 3*s.* 6*d.*

This little handbook corresponds in appearance and general character to former publications from the same source, and is intended for the information of pharmacists, who, in many other respects, are more competent to give advice regarding the treatment of diseases in animals than many who assume to have such ability. It is partly a reprint of matter already published, revised and considerably amplified for this particular work. Its contents comprise information upon the diseases of domestic animals in general, followed by a description of the diseases and treatment of such maladies as commonly occur among horses, cattle, sheep, pigs, dogs, and poultry, and special chapters relating to eye diseases, and wounds and sores. Numerous formulas are given, and an appendix contains the text of British laws relating to sale of horses, contagious diseases, and veterinary practice.

FLAVORING EXTRACTS. By JOSEPH HARROP, PH.G., of Columbus, O.

The author has favored us with advance sheets of 152 pages of a work relating to the preparation of such flavoring extracts, syrups, essences, coloring materials, etc., as pertain to the business of druggists. Brief descriptions—rather too brief, it seems to us—are given of the materials to be employed, although further information is scattered through the work in a manner to render it more valuable, perhaps, for the tyro, but rather confusing. A chapter on Flavoring Extracts is followed by one on Flavoring Essences; another on Syrups; still another on Colorings; and, finally, an Appendix containing matters which will probably go into the body of the text in another edition.

The writer shows evidence of a practical familiarity with the subject, and accompanies his numerous formulas with a running commentary of remarks, advice, opinions, etc., which give to the work a value much greater than belongs to ordinary formularies of this sort. Besides other information the pages at hand contain over 160 formulas.

A TEXT BOOK OF BACTERIOLOGY. By CARL FRAENKEL, M.D., Professor of Hygiene, University of Königsberg. Third edition, translated and edited by J. H. LINSLEY, M.D., Professor of Pathology and Bacteriology, Medical Department of the University of Vermont, etc., etc. New York: William Wood & Co., 1891. Pp. 380, 8vo. Muslin, $3.75.

During a course of instruction in Berlin in 1890 the excellence of Dr. Fraenkel's treatise became impressed upon the translator, and this edition is, therefore, presented as the best available text book on the subject in the English language. It is not offered as an exhaustive treatise, and does not quote other literature—which, for a German book, is something quite unique. It is not illustrated, but the reader will quite likely know already what a microscope is, and will not require a picture of a test tube to render its uses comprehensible. There is a good index, good type, and good paper, and the translator seems to have so far eliminated German idioms as to render the text in good English.

HEREDITY, HEALTH, AND PERSONAL BEAUTY. By JOHN V. SHOEMAKER, A.M., M.D., etc. Philadelphia and London: F. A. Davis, 1890. Pp. 422, 8vo.

This is intended for non-professional readers, and is worthy of unqualified praise as regards the nature of the information it affords and the manner in which it is presented. Commencing with a consideration of conditions which contribute to general healthfulness, the author comes finally to the special care of the skin and its appendages, and the physical elements of beauty, concluding with explicit directions and formulas for such articles as are serviceable as cosmetics or remedies. It is altogether one of the most practical as well as most readable works of the kind that have yet appeared.

PRACTICAL TREATISE ON ELECTRICITY IN GYNÆCOLOGY. By EGBERT H. GRANDIN, M.D., and JOSEPHUS H. GUNNING, M D. Illustrated. New York: William Wood & Co. Pp. 180, 8vo. Muslin, $2.00.

This latest addition to our monographs on electro-therapeutics is by authors of extensive experience in this field, and embraces the recent improvements in methods and apparatus. Its contents relate to general considerations and apparatus; routine uses of electricity; electrolysis; static, franklinic, or frictional electricity; treatment of malignant growths by galvano-cautery, and the use of electricity in obstetrics.

THE CALENDAR OF THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN, 1891. London: Pharmaceutical Society of Great Britain, Bloomsbury Square. Pp. 551, 8vo. Muslin, two shillings.

This calendar furnishes a very complete guide to the details of the work of the Society, to the legal aspects of British pharmacy, and to its membership.

PROCEEDINGS OF THE OHIO STATE PHARMACEUTICAL ASSOCIATION at its twelfth annual meeting, etc., etc. Cleveland, Ohio: 1890. Pp. 126, 8vo.

This report is one of the most creditable publications of the kind which come to us.

TWENTY-SIXTH ANNUAL REPORT OF THE ALUMNI ASSOCIATION, with the Exercises of the LIX Commencement of the PHILADELPHIA COLLEGE OF PHARMACY, for the year 1889-90. Philadelphia: 1890. Pp. 228, 8vo.

In a lecture delivered before the Association last year the speaker gave a number of rules which should govern the use of the eyes, and which may be found on page 68 of this report. We observe that the Association does not appear to have especially regarded the one which reads: "2. Read only good-sized, black letters, printed on white paper, sufficiently thick to prevent confusion from the print on the opposite side." We are happy to say that it is all right otherwise.

Resopyrin.—By combining resorcin and antipyrin Roux has obtained a mixture to which he gives the name of resopyrin. It is an odorless body of feebly pungent taste, which crystallizes in colorless, oblique, rhomboidal prisms; it is soluble in 100 parts of alcohol, in ether, and in chloroform, but is scarcely soluble in water.—*Journ. de Méd., de Chir. et de Pharmacol.*, April 20th, 1891.

American Druggist

AN ILLUSTRATED BI-WEEKLY JOURNAL.

VOL. XX., No. 13. WHOLE No. 211.

WILLIAM WOOD & COMPANY,
PUBLISHERS,
56 & 58 LA FAYETTE PLACE,
NEW YORK, N. Y.

SUBSCRIPTION PRICE per year, - - - - - - $1.50
SINGLE COPIES, - - - - - - - - - .10

Address all communications relating to the AMERICAN DRUGGIST *to* WILLIAM WOOD & CO., *56 and 58 La Fayette Place, New York City, to whose order all postal money orders and checks should be made payable.*

The AMERICAN DRUGGIST *is issued on the 1st and 15th of each month. Changes of advertisements should be received before the 5th and 20th. New advertisements can occasionally be inserted after the 10th and 25th.*

EDITORIAL.

Now that the bottom has dropped out of much of the agitation over cut prices, and the cutters and manufacturers of nostrums are at liberty to take breath and see how far they have benefited by such a windfall of gratuitous advertising, let us see, if we can, where the retailing apothecary stands. He, too, must have got a certain amount of advertising, or at least of notoriety, as a result of so much talk and pamphleteering, discussion and resolving. What is the impression which would naturally be left in the minds of outsiders?

First, that pharmacists claim for themselves the sole privilege of supplying the public with preparations for the proper composition of which they cannot vouch; whose ingredients they know but little, if anything, more about than is patent to any one who can read the label attached to the containers and the pamphlets and testimonials which accompany them. While assuming no more responsibility in regard to the correspondence of the true merits of these wares with the claims made for them by their makers than do the fancy-goods dealers by whom they are also sold, the pharmacist, nevertheless, claims the right to get a larger price for them for the reason that the income from this source has become so large a part of the pharmacist's dealings, and the profit derived from their sale is so essential to his welfare, that the reduction of price to that at which they may be bought in the general stores threatens the loss of the general profit derived from his business, or its diminution to such a degree that it will continue no longer to be fairly remunerative.

This is the general purport of scores of communications and addresses which have been made to pharmaceutical societies and publications during the past year, culminating in resolutions and declarations directed toward the makers of, and wholesale dealers in, these commodities, accompanied, sometimes, with threats of boycotting in case the demands of the retail trade in regard to restricting the price and sale of these wares are not complied with.

Second, it is not very long since the sentiment of the pharmaceutical profession in regard to the handling of these same goods was quite different. It was then the

customary thing, when the question of the sale of "patents" came before a pharmaceutical association, to hear, from those who spoke or read papers, a more apologetic tone. These things were sold reluctantly. Some went so far as never to display them for sale or permit their advertisements or circulars to be seen about their establishment. If they were called for they were produced, and the vender declined to say of them anything favorable or otherwise—simply remarking, if his opinion was asked, that they were among the things which the public considered the apothecary ought to sell, and therefore they were kept for sale to those who wished them and were willing to pay the regular price put upon them. Personally, the apothecary preferred to sell something that he knew about and could guarantee to be just what was claimed for it. That was why he had taken the trouble and gone to the expense of studying such branches of medicine as relate to pharmacy, and was not a simple merchant.

Now, which of these two attitudes correctly represents the pharmacist; or do they indicate that since the days when the latter sentiment prevailed the sentiments and policy of the trader have overtopped those of the professional man, and that they are both, in a measure, correct?

Again, how does the present attitude of the pharmacist—if the recent discussions of the sale of "patents" and its importance as a feature of his business are to be accepted as a true indication—bear upon his relations with the physician? Is there anything in it calculated to increase their mutual dependence upon each other?

A RECENT issue of *La Pratique Médicale* (May 5th, 1891) contains an account of the explosion of a lot of compressed tablets of chlorate of potassium in the pocket of a person who carried them wrapped up in a piece of paper. It is supposed that a sudden "shock," caused, while he was sitting down, between the tablets and a penknife he carried in his pocket, produced the explosion, which is said to have given him a severe burn.

Similar stories regarding chlorate of potassium have frequently been published. In most cases which we have followed they have first appeared in some newspaper and only gradually found their way into the professional press. The features surrounding each story usually stamp it as of about the same character as the "chloroform-soaked handkerchief," relied upon by the unsophisticated as an excuse for some deed of omission or commission, or the tale of the "Neptunian anaconda," so commonly revamped about this time of the year.

We are, of course, fully aware of the possibilities of chlorate of potassium to act as a dangerous explosive under certain circumstances. We know that it needs to be brought merely in contact with certain agents to make it an exceedingly violent explosive. Or it may become so while being triturated or compressed, or by mixing it with certain substances (such as nitrobenzol) and imparting to it a violent shock such as only a "detonator" can impart. But we do not believe that chlorate tablets will explode by being struck by a penknife in one's pocket. If this were so, chlorate of potassium could not be safely powdered, or handled as a commercial article (in casks or boxes), but would have to be treated like gunpowder or dynamite. It is about time that silly canards like this should at least be excluded from professional papers.

IF it *is to be* the fate of the apothecary to serve as a gratuitous agent for the public supply of postage stamps, we suggest that he turn this service to his advantage as a means for advertising, and our proposition is as follows:

Make up a number of books, with about eight leaves of paraffin paper in each, and a cover of heavy paper having the apothecary's business card and a calendar on the outside, and the postal rates and a short and attractive announcement of his own "specialties" on the inside.

These leaves should be about two by three inches, which will be a trifle larger than six postage stamps. By folding together, down the middle, a group of twelve stamps in three rows of four each, so that the faces come together, and placing them between two of these leaves, the adhesive side will, by a little warmth and pressure, or in summer by pressure alone, adhere very slightly to the paraffin paper—not so firmly, however, as to prevent easy separation, although quite enough to prevent their falling out.

The editor of this journal has made such a book for his personal benefit, and has used it at the seashore during the hot months of the past two years. Before that time a sheet of stamps had to be pinned against the inside of a closet door or laid on its face in a drawer specially reserved for this purpose; or the stamps had to be attached to blank envelopes as soon as they were obtained, or else there was trouble. To carry them in a pocketbook was out of the question; to shut them between the leaves of a book still worse; and it became then apparent why so many people, with infrequent occasion for correspondence, prefer to buy a single postage stamp at the time they need it, and never have a few on hand if they can avoid it. The paraffin paper settles that difficulty most effectually, and sticky stamps have their affinity for surrounding objects held completely in check until the suitable occasion arises for its manifestation.

If our readers will accept this hint and make up a few of these holders for their troublesome stamp customers, they will not only save much time consumed in selling single stamps, but will put a good advertisement into the pocketbook or portfolio of the possessor. When one of the books is given, explain its peculiar advantages (but not its essential nature), and if the recipient hasn't got a stamp to try it with, give him one as a "chromo." He won't throw away a stamp, and he generally can't carry it without the book, and there are nine chances in ten that he will show the stamp and the book (and, incidentally, your business card) to several of his acquaintances.

If the business card mentions the willingness of the pharmacist to take special pains to fill orders by mail for things his patrons may want while they are absent from home, it would come well in this connection, and so would a reference to some particularly nice things recommended for relieving sunburn, freckles, mosquito bites, ivy poisoning, prickly heat, etc.; or to the fact that his supply of cigars is selected with reference to a good quality, and that in sending them by mail to customers at the seashore a special air-tight envelope is provided for the boxes, to exclude the atmospheric conditions which ruin the flavor of even the choicest tobacco; or that his toilet waters and perfumes can't be dispensed with when their merits are once appreciated.

Crystallized Chloroform.—The Swiss physicist, Raoul Pictet, has discovered a method of preparing crystallized chloroform for commercial use. Kept in this form it cannot undergo any changes or contain any impurities.

PHARMACEUTICAL NEWS AND NOTES.

NEW JERSEY.

THE twenty-first annual meeting of the New Jersey Pharmaceutical Association, held at Trenton on the 27th and 28th of May, was well attended and successful in all respects. Daniel Bechtel, Esq., the mayor of the city, in welcoming the Association, made one of the most successful addresses of the kind that we have yet known. It was so short, pointed, and sensible that we reproduce it as a model worthy of very general imitation.

"GENTLEMEN: I am very happy indeed to open the doors of our city to your Association. The details of your gathering I know nothing about, and therefore can say nothing on that subject, but I do know that your labors here are intended to benefit the State and are indorsed by the citizens of Trenton. Therefore, as the chief executive of this city, I give you a hearty welcome."

The president, Mr. Maxwell Abernethy, of Jersey City, referred, in his address which followed, to the spirit of progress which led to the formation of the Association and its subsequent growth and influence; to the need for decreasing the number of working hours for both proprietors and employees; to the increasing disposition on the part of young pharmacists to keep abreast of the progress in scientific pharmacy and the importance of encouraging their efforts; to the favorable reception of delegates from the Association to the New Jersey Medical Society, and the desirability of using the mutual representation to influence physicians to restrict their prescriptions to the official and commonly accepted remedies of the Pharmacopœia, National Formulary, or higher class of pharmaceutical literature in preference to those made by so-called pharmaceutical specialists. A standing Committee on Finance was recommended, and an account was given of the recent attempt to secure the adoption of a new pharmacy law. In the matter of exemption from jury duty greater freedom was advocated. A per-diem allowance to delegates was suggested, and attention was directed to the increasing tendency to avoid the provisions of the present pharmacy law. The present disturbances in the drug trade were referred to, and measures calculated to diminish their severity were proposed for consideration, chief of which was the formation of a pharmaceutical laboratory in the State, under the auspices of the Association and for the benefit of its members.

The following names were adopted as those of candidates from whom the Governor shall select two as members of the State Board of Pharmacy: W. R. Laird, H. P. Reynold, A. L. Avery, A. S. Cook, and W. Scott-Taylor.

A committee, consisting of Messrs. Taylor, Avery, Alkers, Linnet, and Holtzhauer, was appointed to formulate a plan for a laboratory, as suggested by the president, and make it known as soon as possible to the members of the Association.

The Board of Pharmacy reported that of 96 candidates examined during the year 63 had been found qualified.

The following-named officers were elected: President, F. R. Davis, Morristown; vice-presidents, E. B. Jones, Mount Holly, and W. S. Taylor, Trenton; secretary, Charles F. Dare, Bridgeton; treasurer, M. W. Townley, Newark.

Plainfield was selected as the place for meeting in 1892. The exhibit held during the meeting was large and interesting, but a source of much noise and disturbance during the sessions. A dinner on the evening of the second day was given at the Trenton House, at which many ladies were present, and good speeches followed a very appetizing *ménu*. Among other good things Mr. R. I. Shaw, of Plainfield, told of an interview between the Committee on the Pharmacy Bill and the presiding officer of the Legislature which occurred some time ago, and how this functionary, supposing that pharmacy must, of course, relate to the *farm*, referred the bill to the Committee on Agriculture.

We have to thank MR. DARE, the secretary, for kind services in connection with the foregoing synopsis of the proceedings.

OHIO.

THE OHIO PHARMACEUTICAL ASSOCIATION met again at Dayton after an interval of eleven years. One hundred and fifty members were present, and 60 new members were added to the roll, which now numbers 922. The scientific business included a paper by Prof. J. U. Lloyd, continuing the subject of Assaying Fluid Extracts, an abstract of which may be found elsewhere in this number; another on the same topic by Mr. Young, of Ada; two papers by Dr. Spengler, on "The Delicacy of Tests for Phenol," and "Examination of Sodium Salicylate"; Prof. H. A. Weber, of the Ohio University, upon the "Cause of Acridity of Arum Maculatum."

The election of officers and committees resulted as follows: President, M. A. Burkhardt, Dayton; vice-presidents, Philip Lehr, Cleveland; Geo. Eger, Cincinnati. Executive committee, J. G. Spengler, Dayton; G. W. Brown, Wilmington; S. E. Allen, Akron. Nominations for Board of Pharmacy, Charles E. Ink, Columbiana; W. H. Haven, Findlay; W. R. Ogier, Columbus; Albert Menninger, Cincinnati; J. H. Von Stein, Upper Sandusky.

COMMITTEES.

Trade Interests.—William Melville, Lima; A. Menninger, Cincinnati; H. Kuhlmeier, Cleveland.

Papers and Queries.—W. Simonson, Cincinnati; E. S. Ely, Barnesville; B. S. Young, Ada.

Pharmacy Laws.—John Byrne, Columbus; Geo. Latin, Dayton; A. Burger, Toledo; Thos. Johnson, Steubenville; Julius Greyer, Cincinnati.

Unofficial Formulas.—J. H. Von Stein, Upper Sandusky; E. Goodman, Cincinnati; C. T. Inman, Akron; Philip Acker, Cleveland; T. J. R. Peffner, Delaware.

Insurance.—J. J. Hovecamp, J. G. Stierle, Versailles; W. H. Haven, Findlay; C. N. Nye, Canton; A. C. Lewis, Bucyrus.

Education.—G. B. Kauffman, Columbus; F. T. Bower, Toledo; John A. Nipgen, Chillicothe.

Adulterations.—C. T. P. Fennel, Cincinnati; H. C. Cook, Columbus; N. Rosenaser, Cleveland.

Delegates to N. D. A.—G. L. Heckler, Cleveland; A. Menninger, Cincinnati.

Delegates to Pharm. Soc. of Amer. Med. Assoc.—J. U. Lloyd, Cincinnati; L. C. Hopp, Cleveland; G. B. Kauffman, Columbus.

The fourteenth annual meeting will be held at Canton on the second Tuesday of June next. The Association is fortunate in retaining the services of Mr. L. C. Hopp, of Cleveland, as its secretary.

Judging from the report at hand, the Committee on Adulterations must have found the drug supply of Ohio markets so far above criticism that they were forced to go outside of this line of goods for materials and report upon pepper, mustard, and coffee.

KENTUCKY.

THE fourteenth annual meeting of the Kentucky Pharmaceutical Association convened in the Senate Chamber at Frankfort, Ky., on Wednesday, May 20th, at 3 o'clock, under the most auspicious circumstances. The weather was perfect, and the hills around the Kentucky capital were never more lovely. The meeting was called to order by the president, J. J. Brooks, of Richmond. Dr. U. V. Williams, on behalf of the citizens of Frankfort and the local druggists, delivered the address of welcome, which was responded to by M. C. Peter, of Louisville.

The reports of the various standing committees indicated a most satisfactory condition of the Association in all its departments. Seventeen applicants were received into membership. The series of eight resolutions adopted by the American Pharmaceutical Association at New Orleans, concerning a "Plan to Prevent Cutting of Prices on Proprietary Articles," were unanimously indorsed. W. S. Johnson, of Henderson, offered the following resolution, which was adopted:

"*Resolved*, That the Legislation Committee take such steps as may be deemed necessary to obtain an amendment to the present pharmacy laws, placing druggists on a footing with grocers in the collection of debts, and make their claims against decedents for necessaries furnished during last illness preferred."

Among the papers read were the following: "Triturations," by W. Chapman, of Frankfort. "Solubility of the Coating of Pills," by G. Holzhauer, Newport. "Forty Years in the Retail Drug Business," by E. C. Pfingst, Louisville. "Our Commercial Status," by M. C. Peter, of Louisville.

The Committee on Nominations named the following officers for the ensuing year: President, W. Chapman, Frankfort; 1st vice-president, J. J. Samuels, Danville; 2d vice-president, J. A. Haynes, Owensboro; 3d vice-president, G. Holzhauer, Newport; permanent secretary, J. W. Gayler, Frankfort; corresponding secretary, T. G. Julian, Mt. Sterling; treasurer, H. Jett, Cynthiana.

A visit to the Kentucky penitentiary, and a carriage drive to the cemetery and other points of interest about the city, were among the social features. [What peculiar ideas of festivity those Frankfort people have!—ED. AMER. DRUGG.]

The meeting closed with an elegant banquet, at which the following toasts were made and responded to: "Our Commonwealth," Gov. S. B. Buckner; "Scientific Pharmacy," Dr. J. P. Barnum, Louisville; "The Press," Col. E. Polk Johnson, Frankfort; "The Pharmacist at Large," M. C. Peter, Louisville; "Our Profession," W. S. Johnson, Henderson; "The State Board of Pharmacy," Dr. Wiley Rogers, Louisville. Major H. T. Stanton, of Frankfort, read a poem prepared for the occasion. The meeting then adjourned until May 28th, 1892, at Carrollton.

FLORIDA.

THE fifth annual meeting of the Florida State Pharmaceutical Association met at Jacksonville on the 19th, 20th, and 21st of May in the parlor of the Everett Hotel, with about sixty members present.

Mr. D. U. Fletcher, on behalf of the city of Jacksonville (in the absence of Mayor McQuaid), made an eloquent address of welcome, which was happily responded to by the president, Mr. W. A. Rawls, of Tallahassee.

Following this, President Rawls delivered the usual address to the members.

Twenty-five new members were unanimously elected, viz.:

L. P. Lawrence, Orlando; S. A. Lowry, Palatka; E. M. Williams, Ft. Myers; Dr. J. M. Jackson, Bronson; Aurelio Martinez, Key West; P. G. Guichard, Tampa; J. H. Haughton, Palatka; L. F. Sherman, St. Augustine; D. Burgheim, Savannah, Ga.; R. W. Cobb, Pensacola; J. W. Matchett, Tampa; G. B. Smithon, Lake City; W. C. Simmons, Monticello; Dr. Victor Lafosse, Ocala; J. M. Townley, Kissimmee; Dr. Geo. Macaulay, Mandarin; E. K. Norwood, Jacksonville; W. H. Mook, Jacksonville; W. R. Fenner, Jacksonville; H. R. Thomas, Jacksonville; G. W. Williams, Jacksonville; Thomas Clarke, Jacksonville; Dr. H. Sohl, Jacksonville; Walter Hay, Jacksonville; H. L. Irwin, Jacksonville.

Resolutions respecting the death of Dr. A. R. Spencer and Mr. W. E. McDougal, two valued members, were adopted and ordered spread on the minutes.

The following was offered by A. E. Phillips, relating to the cut-rate nuisance, and adopted by the Association:

Whereas, The practice of cutting prices on proprietary preparations has become in many cities exceedingly hurtful to the legitimate interests of retail druggists, rendering the handling of these goods a burden, and productive of positive loss rather than profit; and

Whereas, This ruinous practice emanates chiefly from department stores, which have no legitimate right to handle such goods, and which resort to the custom of cutting the prices below actual cost merely as a mode of advertising and popularizing their business, in order to enlarge their opportunities to fleece a misguided and unsuspecting public by selling other wares at extortionate prices; and

Whereas, This example in many instances induces certain retail druggists to indulge in the same practice for the same dishonest purposes, thereby not only attempting to gain for themselves excessive profits on other goods, but unmerited praise as generous benefactors of the public, to the pecuniary and moral detriment of their honest competitors; and

Whereas, These practices, though more prevalent in the great Northern cities, are gradually and surely extending their progress and baneful influence further and further southward; and

Whereas, The various associations of manufacturers, wholesale and retail dealers, local, State, and National Pharmaceutical Associations, are moving in the direction of prohibiting further such voracious and ruthless encroachments upon the common rights of honest retail druggists; therefore be it

Resolved, 1st. That this Association denounces the practice of cutting prices on goods which are, or should be, peculiar to drug stores, as dishonorable and productive of results morally degrading and destructive to honest interests.

Resolved, 2d. That in the opinion of this Association the manufacturers and proprietors can, if they will, so control their preparations as to keep them out of the department stores and the hands of other cutters, and that it is their duty to do so and to confine the sale of their preparations to honorable wholesale and retail druggists exclusively.

Resolved, 3d. That this Association, collectively and individually, pledges itself to co-operate with any practicable plan which may be formulated by the manufacturers and proprietors, or by the American Pharmaceutical Association, and acquiesced in by the manufacturers and proprietors, which shall have for its objects the confining of the handling and sale of all proprietary preparations to the legitimate drug trade, without increase of cost, the maintaining of full retail prices, and the exercise of general and secure protection against the "vampires" who have sucked the life blood out of the legitimate profits of retail druggists so long.

The following-named ladies, accompanying some of the visiting members, were unanimously elected honorary members for the session: Miss Jackson, and the Misses Claire, and Lizzie Askew, of Tampa; Miss Smith, of New Smyrna; Miss Akerman, of Palatka; Miss Sistrunk, and Miss Biggs, of Ocala.

Dr. H. Robinson and Messrs. W. A. Dell and J. R. Skipper were appointed a committee to award the medals offered as prizes for the best papers to be read at the meeting. There were five candidates: A. E. Phillips, Sanford; H. C. Cushman, Pensacola; W. H. Lightstone, Jacksonville; J. M. Dixon, Titusville; and L. W. Cherry, Brunswick. The gold medal was awarded to Mr. Phillips,* and the silver one to Mr. Cushman. The committee highly complimented the other papers, and pronounced them an honor to the Association and well worthy of honorable mention.

The following officers and committees were elected for the ensuing term: President, A. E. Phillips, Sanford; first vice-president, N. Wooldridge, Jacksonville; second vice-president, H. C. Grove, Ocala; third vice-president, Wm. Aird, Jacksonville; secretary, S. P. Watson, Jacksonville; treasurer, Ed. Delouest, Ocala.

Executive Committee—F. P. McElroy, chairman, Dade City; F. D. Ackerman, Palatka; H. R. Thomas, Jacksonville.

Legislative Committee—T. G. Rawls, chairman, Tallahassee; D. G. Smith, Madison; H. V. R. Schrader, Tallahassee; H. C. Cushman, Pensacola; J. S. Frazer, Ocala.

Trade Interest Committee—Dr. H. Robinson, chairman, Jacksonville; H. C. Grove, Ocala; W. A. Dell, Jacksonville; W. A. Rawls, Tallahassee; R. J. Skipper, New Smyrna.

Papers and Queries Committee—W. H. Lightstone, chairman, Jacksonville; Wm. Anderson, Ocala; R. J. Martinez, Jacksonville; W. S. Turner, Tompkinsville; C. D. Horne, Jacksonville.

Delegates to American Pharmaceutical Association—S. P. Watson, Jacksonville; W. A. Allen, De Land; J. M. Townley, Kissimmee; H. C. Cushman, Pensacola; S. A. Lowry, Palatka.

Alternate Delegates to A. P. A.—A. P. Fries, Jacksonville; A. C. Hankins, Bartow; Dr. J. L. Horsey, Fernandina; Richard Lewis, Marianna; T. E. B. Kernan, St. Augustine.

St. Augustine was selected as the place, and the second

* Mr. Phillips' paper will be found on page 165 of the AMERICAN DRUGGIST for June 1st, 1891.

Tuesday in April as the time, for holding the next annual meeting. The secretary was requested to advise the local druggists of St. Augustine that it was the sense of the Association that they should not be expected to provide any elaborate entertainment, but, in conjunction with the secretary, arrange a suitable programme and allow the visiting members to pay for tickets, etc., on the same basis as residents.

The Board of Pharmacy held a meeting simultaneously with that of the Association, at which six candidates were examined for registration papers. One was rejected and the others received certificates, viz.: G. W. Williams, Jacksonville; H. R. Thomas, Jacksonville; W. C. Simmons, Monticello; B. G. Bryan, Tampa; G. B. Smithon, Lake City.

NORTH CAROLINA.

THE twelfth annual meeting of the North Carolina Pharmaceutical Association will be held on the 8th and 9th of this month at Morehead City. This is on the Atlantic coast below Cape Hatteras, and is most attractive as a meeting place. The secretary, Mr. F. W. Hancock, of New Berne, advises the purchase of railroad tickets at reduced rates to Goldsboro only, and a return-trip ticket at that place to Morehead City. Those who expect to present papers are asked to inform Mr. W. H. Wearn, of Charlotte, chairman of the Committee on Papers and Queries. A meeting of the State Board of Pharmacy will be held at the same time and place for the convenience of applicants for license. Mr. William Simpson, of Raleigh, secretary of the Board, will give any information that may be desired in relation to the requirements, etc. The Atlantic Hotel offers a special rate of $2 per day, and the Entertainment Committee promises social features which will exceed anything provided during recent years. Mr. R. J. Godding is the local secretary.

PENNSYLVANIA.

AT the meeting of the Medical Society of the State of Pennsylvania, held June 5th, the Society elected as a Committee on Pharmacy: Dr. H. A. Hare, Dr. C. W. Bachman, Dr. J. C. Lange, Dr. W. T. Bishop, and Dr. T. J. Mays.

Dr. Solomon Solis-Cohen, of Philadelphia, read a paper on "Patent Medicines and Newspapers." He forcibly denounced the popular method of advertising proprietary medicines in daily and other journals, and called upon the editors of such papers to assist in eradicating this palpable evil. He claimed that many a patient has suffered not only an aggravation of his condition, but has been hastened into the grave, as a result of adopting some method of treatment recommended in the newspaper advertisements.

A paper on "The Pharmacology and Therapeutics of Euphorbia Pilulifera" was presented by Dr. John Aulde, who dwelt largely on the benefit following the use of this drug in cases of asthma and other bronchial affections.

CALIFORNIA.

DR. W. R. CLUNESS, of Sacramento, president of the California State Medical Society, in an address delivered in April, presented the result of laborious investigation of the custom of paying physicians a percentage on their prescriptions. Inquiries were made in all parts of the United States as to the prevalence of this practice, and in one hundred and six large towns and cities it was shown to exist in sixty-seven and was suspected in thirty-nine.

The custom seems to be extremely and scandalously prevalent in San Francisco. One physician of that place writes:

"I have been repeatedly approached by them (apothecaries), and commissions ranging from 30 to 75 per cent have been offered; indeed, many druggists openly maintain that they can afford, and in fact do give physicians, all the receipts of the first prescriptions, contenting themselves with what they call 'the repeats.' . . . In order not to have patients go to another drug store, one druggist has envelopes which are given to the physician, who seals the prescription in the envelope; another apothecary has prescriptions telephoned to him directly from the doctor's office, and pays for the rental of the telephone. I had one patient tell me that his drug bill was larger than his physician's bill (of course, while under another physician's care)."

There are now two San Francisco druggists who announce a revolt from the system by conspicuous placards, one of which reads: "People's Drug Store; No Commission Paid to Physicians on Prescriptions"; and another bears the legend: "No-Percentage Drug Store."

MISSOURI.

MISSOURI druggists are becoming indignant over the present pharmacy law, which they claim is worse than no law at all. The chief fault of the present regulation is that it cannot be enforced. This causes the law-abiding druggist to go to the trouble and expense of registering, while his less conscientious competitor enjoys equal rights without a thought for the law. Then the clause which permits doctors to register without an examination is a sore in the flesh of the competent pharmacist. The country doctors register as druggists, and then loan or hire out their certificates to men totally ignorant of the drug business, but who desire to compound prescriptions. The lawmakers in other States should take warning and not frame a law after the Missouri statute.

This State is no exception to the rule that it is difficult to secure the enactment of good State pharmacy laws. The progressive Missouri druggists have been at work for four years to amend the present statute and bring it more in accord with the condition of the profession of the day. Two years ago the Legislature took a backward step, and amended the law so that it is worse than before. This session of the legal body has distinguished itself by doing nothing. A bill passed the House, but was pigeon-holed in the Senate, and there it now rests. The plucky druggists of the State are determined not to give up the fight, and are now trying to induce Governor Francis to embody the bill in his call for a special session of the Legislature, and have it taken up as unfinished business. There is but little doubt about the bill becoming a law under such circumstances.

President Bard, of the State Association, recommended the formation of local organizations. This was unanimously indorsed by the Association, and should be carried out by the druggists of the State. The State Association is a good example of what can be accomplished by organized effort. The St. Louis Apothecaries' Association will do as a pattern for the new bodies. It is not cumbersome, and has the power to work, with success as fruit of the effort. All that has been done to restore prices here is directly traceable to the Association. The Kansas City druggists also have a good organization, and the members are not sleeping. The prominent men of these two associations are among the life and sinew of the State Association. Now is the time for active druggists in other sections of the State to come forward and show their colors. Such places as St. Joseph, Sedalia, Jefferson City, Springfield, Carthage, etc., must let the world hear from them.

Drug clerks, like all other persons who work for a living, are constantly hearing of some more eligible location where more money can be made with less exertion. The drug clerks of Missouri form no exception to this rule. But I believe that this State is as favorable as any in the Union for those who compound prescriptions for a living. The wages paid here are not high, but they compare favorably with the salaries elsewhere, when expenses are considered. The cost of living in Missouri is nominal. The climate is not severe in either summer or winter, and is as healthy as can be found in this country. The State pharmacy law is not all that could be desired, but the profession is in a fair condition, and drug clerks have rights which are respected. Competition is not as great here as it is in the East, nor is the country as new and unsettled as the West. This seems to be the happy medium where clerks can find as much to be thankful for as in any place. I refer to good drug clerks, for there are plenty of poor ones here now.

Poor old Robinson Crusoe devised many little contrivances to relieve his distress and render life on the island durable. He was ingenious, and so are some druggists. It is surprising what can be made for use in a store when

one sets about it. At least a person will think so who visits the store on Park and Missouri avenues, and owned by H. E. Hoelke, the venerable ex-president of the St. Louis College of Pharmacy. Mr. Hoelke is a druggist and chemist by study and occupation. He has grown gray in the service, and is now ready to show young men (and old ones too) many a little contrivance which saves both time and money. It is well worth the time for a druggist visiting the city to call on him. G. H. Chas. Klie, at 5100 North Broadway, has another store which is a study. The place is large, clean, and system prevails. The stranger who steps in is impressed with an air of "silence and accuracy" that must affect the thoughtful customer who has a prescription to be compounded. This store contains the most complete chemical laboratory of any in the city, and Mr. Klie knows how to make use of it.

The Missouri State Pharmaceutical Association met at Excelsior Springs, June 9th, 10th, 11th, with a larger attendance than at any previous meeting since its organization. Everything was harmonious during the entire three days' meeting, even when the work of the Kansas City Pharmaceutical Association was brought up and discussed. President Bard called the Association to order on Tuesday afternoon, and after a prayer by Rev. J. B. V. Flack, F. D. McCollum, mayor of the city and proprietor of the "Elms," made an address of welcome, asking every member to feel as much at home as if he owned the entire "Elms" and beautiful lawns surrounding it. John S. Moffett responded on behalf of the Association. The president presented his annual address, which was followed by reports of the officers, and the meeting adjourned till the next morning at 9 A.M.

Among the papers read at the meeting were: "Two Explosives used in Pharmacy and Medicine," "Adulteration of Ground Flaxseed with Oil Cake," and "Syrup of Wild Cherry," all by G. H. Chas. Klie, of St. Louis; "The National Formulary," by Francis Hemm, of St. Louis; "Fifty Notes for Druggists," by H. M. Whelpley, of St. Louis; "Methods of Testing the Limits of Impurities in Pharmaceutical Chemicals," by Chas. O. Curtman, of St. Louis; "Volumetric Estimation of Acetates," by Claude C. Hamilton, of Kansas City.

The officers elected for the ensuing year are: President, Francis Hemm, St. Louis; first vice-president, George H. Bennett, Pierce City; second vice-president, G. Howard Willett, Kansas City; third vice-president, R. H. Swinney, Ash Grove; treasurer, Gus V. Meyer, St. Louis; permanent secretary, G. H. Chas. Klie, St. Louis; assistant secretary, Ed. G. Orear, St. Louis; local secretary, L. C. Cravens, Excelsior Springs. The Council consists of W. E. Bard, J. M. Good, C. E. Corcoran, H. M. Pettitt, H. F. A. Spieker.

The following names were chosen, from which the Governor will be requested to select two to serve on the State Board of Pharmacy: Gus Fleischman, G. W. Willett, J. M. Love, S. Breunert, Dr. Franklin, Dr. Pettitt.

The next annual meeting will be held at Excelsior Springs, and all papers to be read before the Association must be sent to the Committee on Papers twenty days before the meeting, so that printed copies may be distributed among the members before the paper is read.

LATHROP, MO., has developed some rather peculiar sensations during the past year, and it looks as though the supply was by no means diminished. Last fall indictments were found against a number of druggists for selling tincture of Jamaica ginger without prescription. The cases were called at Plattsburg on the 9th. J. F. Bacon, who has been a drug clerk for 15 years, answered to five indictments. He pleaded guilty to selling the tincture; the court held it was intoxicating and assessed a fine of $25 and costs in each case. Mr Bacon has for years been a leading worker in the Methodist Church, and looks upon his prosecution as nothing but spite. Ed. M. Lennington, another drug clerk, stood a trial, said he had a right to sell the tincture of ginger, or any other tincture of recognized medical utility, but the court held that it was an intoxicating liquor and assessed a fine of $40. There is a widespread feeling of resentment among the druggists of the county, and they view with alarm the precedent and the restrictions it necessarily throws about them. They do not hesitate to pronounce it a very unrighteous decision, and it will probably be carried into a higher court.

Missouri has two colleges of pharmacy within its borders—the old St. Louis College, which has been in existence ever since the war, and the Kansas City College. They are both prospering and seem to be filling a mission. It now looks as if they will soon be assisted in their work by a third institution, to be located in St. Louis. Such a move has been threatened more than once, and now an effort is being made to execute it. If the new college opens it will probably create a condition of affairs similar to what exists in Chicago.

Kansas City.

JAMES TAYLOR is with Palmer & Co., 12th and Broadway.

JOHN R. COOK & CO.'s stock has been bought by Woodward, Faxon & Co. for $5,000.

MR. MOODY, of Nevada, spent the 11th in Kansas City. He was on his way home from the M. P. A.

J. LEMON temporarily succeeds MR. STRONBERG with G. Riddle, at 14th and Summit streets.

MR. NELSON, of Odessa, Mo., stopped over the 11th on his way home from Excelsior Springs, where he had been attending the Missouri Pharmaceutical Association.

MR. IMPEY, of Hopkins & Weller, St. Louis, is in town owing to serious illness in his family.

CHADWICK, SEITZ & CO. have sold their stock in the drug store opposite the Custom House to Palmer & Co., who have removed it to 12th and Broadway. They look cosy in their new home, and will doubtless secure their share of the trade.

JOHN OECHSLE, Deputy United States Marshal, returned home from Princeton, Mo., on the 9th, where he arrested A. L. McIntosh, charged with selling whiskey without a government license. McIntosh runs a "lady-or-the-tiger" drug store. He has been tried before, and this time was arrested on a capias.

DR. C. A. PINKARD has purchased the large drug store at 321 Kansas avenue, and is making ready to accommodate a large trade. The doctor has transferred his entire stock from his old store on Osage avenue to his new location. He is by no means a stranger in Kansas City, Kan., having been a resident of the southern portion of the city since the latter part of 1888, during which time he has acquired a large circle of friends and established the nucleus of a fortune. Arriving in this city with scarcely anything, he has built up gradually the large business which he has so much enjoyed at 765 Osage avenue. His new purchase on Kansas avenue is being thoroughly remodelled throughout the interior, and when the work has been finished the store will present an appearance which will be excelled by none in the consolidated city.

MASSACHUSETTS.

THE KANE PHARMACY, of Turner's Falls, has been closed by the sheriff for the past month.

GLIDDEN & CO., pharmacists, of Brockton, have assigned with liabilities of $4,000.

H. A. HAMILTON'S drug store in Springfield was entered by burglars on the night of June 17th and a quantity of cigars taken. Perhaps they were acquainted with the popular brands that he dispenses.

HATHAWAY & CO. have opened a new pharmacy in Salem, in addition to the one they have conducted there for several years.

THE NEW ENGLAND DRUGGIST is now under the management of Courtis & Arrington, both of whom are old hands at the newspaper business. Many new features are promised.

F. S. STONE, of West Fitchburg, has sold his pharmacy to the Thorn Medicine Company, who manufacture a number of specialties as well as run a drug store. Mr. Fenwick, long with H. S. Estabrook, has charge of the store. Mr. Stone will soon open a new store in Fitchburg.

CONVERSE WARD has moved into a new location in Athol and put in a handsome new tile fountain.

MR. C. D. HUNTER, of Marlboro, is quite sick with rheumatism.

KANSAS.

THE Kansas State Board of Pharmacy held its quarterly meeting at Emporia, June 9th, 10th, and 11th. The officers elected for the ensuing year are: President, F. E. Halliday, Topeka; secretary, H. W. Mehl, Leavenworth; treasurer, C. J. Butin, Fredonia. There were thirty-nine applicants for examination, of which the following were successful: Registered pharmacists: Peter Diedrichsen, Anthony; L. E. Garnett, Grenada; Walter E. Wilson, Miltonvale; Delos Graves, Garnett; C. F. Rutledge, Frederic; Nicholas Bristow, Horton; A. M. Smith, Howard; L. J. Schmidt, Wakeeney; Edward E. Lair, Topeka; W. I. Posser, Osage City; D. M. Reber, Beverie; F. E. Evans, Wichita; P. L. Fraser, Netawaka; W. R. Kennedy, Topeka; George F. Dawson, Abilene: D. E. Sanlau, Chapman. Assistant pharmacists: W. P. Pugh, Cottonwood Falls; J. J. Cavanaugh, Osage Mission; Charles Joyce, Independence; H. R. Funk, Belle Plaine; H. C. Oatman, Lawrence; Arthur L. Dyer, Wichita.

The next meeting of the Board will be held at the Madison House, Jefferson City, on July 6th. Examinations will begin at 9 A.M. The fee for examination is $3. Duplicate certificates will be issued on return of the original, or on sworn statement that the original has been destroyed or lost. The fee for a duplicate is $1.

ILLINOIS.

A MEETING of the Chicago Retail Druggists' Association was held at the Sherman House, June 16th, which was very largely attended by the retail druggists of the city. The five leading wholesale druggists were also represented. Resolutions were adopted and committees appointed to take charge of the following matters:

1. To draw up a contract with Chicago jobbers to refrain from supplying cutters and retailing at wholesale prices. Committee: Wm. Bodemann, A. E. Ebert, T. N. Jamieson.

2. To present the question to the Illinois Pharmaceutical Association. Committee: Hugo W. C. Martin, C. Feldkamp, Andrew Sherer.

3. To bring about a union in the leading Western cities. Committee: Wm. Bodemann, J. W. Blood, E. K. McPherson.

4. To keep an eye on the cutting problem in Chicago. Committee: J. B. Knor, A. Oberman, Dr. R. Dycke, Andrew Sherer, E. K. McPherson, C. Feldkamp, Ira Marshall, Frederick Klein, C. B. Wilson, J. M. Weaver, Rud. Stangohr.

After adjournment a number of the members expressed themselves freely in favor of forming a close union with the C. R. D. A. of all such druggists as are willing and ready to stand by each other to flat-footedly refuse dealing with any jobber who is found to ignore the retail trade by selling to their worst enemies, these "cutters," and by selling to the patrons of the retailers at wholesale prices.

E. K. MCPHERSON, Secretary.

CANADA.

THE business outlook in Canada, to use the stilted phraseology of the mercantile agencies, is at present very dark indeed. In conversation with one of the prominent financiers of this province a few days ago, he said that he had noticed a depression in trade every seven years, and that this was the end of one of these periods. It may be so. At all events, never in the course of my limited experience (some ten or twelve years) in business have I noticed such torpidity. Collections are made with difficulty; goods are being sold at outrageously low prices and on extremely liberal terms. Men who hitherto have made it a point to buy for cash and save discounts, are taking time, and, in many instances, asking for renewals. In looking over the semi-annual reports of one of our most successful banking institutions, I notice that they have money amounting to hundreds of thousands on deposit, bearing a small rate of interest. This I have always considered an unfailing financial barometer. Those farms and other properties which some years ago were mortgaged for half their value, will to-day bring hardly more than one-half the amount of the money loaned. Again, one of the largest railroads in the Dominion is continually reducing the salaries of its employees, which certainly does not show an increase in the profits or amount of business done. Where to look for the cause of all this would puzzle the best of us. Assuredly the late troubles in the different parts of the world have some effect on the money market, and the recent death of the foremost man in the Dominion has lessened the confidence in the party in power. A possible—barely possible—reversion to free trade has made manufacturers curtail their outputs and buyers wary in their speculations. The continued excessively dry weather is affecting the crops and altogether must produce dull times; yet withal I cannot see why things should be so infernally—that is about the strongest printable adjective—quiet. If Russia, Germany, or some other European power spoiling for a fight, does not inaugurate a series of international military competitions, it is hard to say what will happen.

Speaking of competitions, I am reminded of the perennial activity of the combative spirit existing in the members of the Ontario College of Pharmacy. A Presidential election could not call forth as bitter a display of antagonism, and, though the vituperations may be couched in more refined language, the sting is not thereby removed. They do not call each other blanked liars or dashty-dashed rascals, preferring such phrases as "conscienceless perverters of veracity," and "men utterly lacking even the primary principles of integrity." Why don't those immediately interested form a ring in the College quadrangle and settle it by the M. of Q. rules—or Chinese, if they prefer it? It would give the majority of us more time for the contemplation of things more edifying than the sight of one man gratifying a thirst for notoriety at the expense of two of the best educated and most revered men in this particular branch of the economic industries. At the same time the atmosphere surrounding our trade journals would savor less of petty minds or petty instincts controlled, and grade the road to that professional Mecca aspired to by all pilgrims through this desert of ready-made pills, plasters, and patent medicines. One cannot read any of our Canadian trade organs without being reminded of that village council where the members thereof, in their discussions pro and con the establishment of a village bog-pound, imagined that the inhabitants of this entire planet and perhaps of a few others in the solar system awaited impatiently the weekly issue of the village "Star Transcript and County of —— Screecher," containing a verbatim report of the meetings, and graded their rhetoric accordingly.

The announcement of the result of the examinations held last month at the Ontario College of Pharmacy has gladdened the hearts of sixty young men. Twenty-five of them secured a sufficient number of marks to entitle them to a place on the honor roll. Mr. C. A. Yates, of Goderich, secured the college and Shuttleworth gold medals; Mr. G. J. Sadler, Ottawa, the college silver and D'Avignon gold medals; and Mr. R. Baxter, of Windsor, the Avison gold medal.

This argues favorably for the intelligence of the students or the efficiency of the professors, probably both. The course is longer and more comprehensive than it was some six or seven years ago, but the examinations are ever so much harder. The Ontario College of Pharmacy has no need to feel ashamed of the men it turns out, and it could stand comparison with any other American school—or Continental, for that matter.

Section 26 of the British Columbia Pharmacy Act, which passed its third reading on March 3d, entitles any person presenting a prescription to a druggist to be filled to have such prescription returned to him by such druggist.

It is not my place to pass judgment on the wisdom or otherwise of the legislators in inserting this clause, but one cannot help thinking that, while it defines the ownership of the prescription and may prevent legal interference in the matter, it may lead to undesirable results.

Little harm is done by a circulating family recipe, as long as it contains no potent remedy; but when a prescription containing morphia, chloral, or any of the

narcotics, is allowed to become the common property of a public ignorant of its contents or the physiological effect of the medicines designated, and when a physician has no authority to control—in fact, is prevented from controlling—the use of remedies which, though admirable and indispensable in their places, may work incalculable harm by their abuse, one is liable to rate the common sense of the framers of the act very low. So prevalent has the habit of taking narcotics become, and so great has the evil grown, that it is surprising that men gifted with an average amount of thought-works should deliberately pour oil on the already devastating flames.

ENGLAND.

INFLUENZA still holds its sway in our midst, although with apparently diminished virulence. Chemists generally have been very busy during the last month, and have appreciated the welcome change. Only sixty-four death cases were directly attributed to the epidemic in London during the last week, but the death rate is still double the normal average. As usual our medical friends have been learnedly debating the origin and rise of the pest. Dr. Alfred Carpenter, in a communication which he says will be later on presented more fully to the British Medical Association, states his belief in the theory, to which Dr. Symes Thompson gave credence last year, that the origin is to be found in organisms produced by miasmatic influences in Northern China. Immense tracts of land were inundated for several months, and since then we have experienced strong northeasterly winds, which have brought the germs safely to our shores. Sir Morell Mackenzie, M.D., defines influenza as an acute specific fever, divisible into three varieties: catarrhal, abdominal, and nervous. Each of these is distinct and separate in its symptoms, but they may be intermingled or succeed one another. He considers the cause of the disease to be a specific poison of some kind which gains access to the body, and having an affinity for the nervous system, attacks it especially.

The British House of Commons has recently been "disinfected" on what has been rather pompously described as the most modern and approved antiseptic principles. This was done to allay the fears of some of the more timorous legislators; but scientists have been laughing in their sleeves at what was little more than a farce. It was stated that it was impossible to use ordinary sulphur fumigation, as the gilded cornices and appendages would have been irretrievably spoiled. So the method adopted was to sprinkle "thiocamf" over the floors, after the removal of cushions, etc., and to burn a few sulphur candles. It is well known that dry sulphur fumigation is useless, especially where the leakage of the sulphur dioxide must have been enormous. But this gaseous mixture was finally dispelled from the House by powerful fans on the Thames Embankment, by which most of the good done was obtained. Thiocamf is a patented disinfectant invented by Prof. J. Emerson Reynolds, M.D., F.R.S., who holds the chair of chemistry at Dublin University. It is a liquid formed by the action of sulphurous acid on camphor, which on exposure evolves the sulphur dioxide in steady fumes. Although in an ordinary way sulphurous-acid gas requires a pressure of over two atmospheres to liquefy it, contact alone with camphor effects the liquefaction speedily and without pressure. This liquid is stable and permanent when contained in closed vessels, but rapidly evolves the SO_2 on exposure.

It is quite true that the term antiseptic should be more carefully employed. There is no evidence whatever that half the patented disinfectants are antiseptics in the strict scientific sense. No one can, for instance, imagine that the fumigation adopted in the British Parliament would injuriously affect the spores of bacilli or micro-organisms. Dr. Klein, F.R.S., a few years ago pointed out that spores which have for twenty-four hours been subjected to the most powerful substances in common use as antiseptics, still retained their virulence when animals were inoculated with them.

Much has been made of Koch's discovery of the relative power of various antiseptic and germicidal agents, in which he found that the addition, for instance, of 1 part in 600,000 of perchloride of mercury, is capable of checking the germinating power of the spores of bacillus anthrax. But Klein maintains that perchloride is not a true antiseptic in that instance, for the spores may be steeped in a strong solution for any length of time, and yet when transferred to a suitable cultivation medium they grow and multiply.

It has been said that this is the "antiseptic age." In discs or pellets, in gauze and wool, we have all the known so-called antiseptics introduced, and yet one of our most brilliant surgeons repudiates their use, and states that if he could obtain sufficient bacteria he would make them into a poultice and apply it to his patients' wounds!

Preparations are already in progress for the annual meeting of the British Medical Association, which this year takes place at Bournemouth. Most of the wholesale druggists have applied for space for their exhibits. An interesting feature in these is the large number of new remedies that always appear. The handsomest exhibits are those where all bottles possess recess labels—that is to say, the space for label and its background of white enamel are moulded after the bottle is blown; it is then finished off by gold borders and black lettering, which gives it a splendid appearance. I may add that the Pharmaceutical Society have had their dispensing examination room completely fitted up with these bottles.

A recent improvement in hypodermic pellets has been introduced by Messrs. Allen & Hanbury. It consists of the addition of a small quantity of citric acid and bicarbonate of sodium to the pellet, so that when dropped into water effervescence takes place and the pellet speedily disintegrates and dissolves. It is pointed out that this obviates either of the necessities of crushing a refractory tablet or dissolving it by heat. The *Lancet* has reported in a very complimentary manner on the innovation.

Another distinct advance in the art of pharmacy has been patented by Messrs. Oppenheimer, Son & Co. It consists of two tiny discs of gelatin, cemented at their edges, and containing the medicine loose in the interior. These are called "palatinoids," an obvious derivation from the word palate. They are no larger than an ordinary five-grain pellet or tablet, and possess the immense advantage that they are more easily taken than pills. When one is dropped into water the two edges separate, oyster-like, and the enclosed powder drops out. Messrs. Oppenheimer inform me that they have several important combinations and improvements in connection with these elegant preparations. They will shortly be in a position to offer them in various sizes, and some have been made containing ten grains of extract of male fern. A large variety of formulas are kept in stock, most of which are of half, one, or two grain size palatinoids. They are sold in cylindrical bottles containing twenty-two palatinoids, at prices varying from $2 to $3 per dozen bottles.

London Market Report.

MINCING LANE, June 12th, 1891.

The present low price of opium has been largely taken advantage of here, and rates have receded slightly in consequence of favorable news from the East. Karahissar is selling at 2.2 to 2.3, Tokat and Malatia at lower rates. The total output of the crop is estimated at 8,000 cases, whilst at the same date last year it was only estimated at 5,000. Business at the Drug Auction yesterday was fairly good and a better tone prevailed. Cardamoms, ipecacuanha, sarsaparilla, and beeswax were dearer, whilst jalap and rhubarb alone suffered relapse. Quinine is declining. Citric acid has remained steady, but chemicals generally are quiet. Borax is firm and alkalies dull, although without alteration.

The following are current prices:

Arsenic	per cwt.,	$3.0	Oils, aniseed	per lb.,	$1.46
Bleaching p'wd'r	"	1.8	cajuput	"	0.70
Borax cryst.	"	6.8	lemon	"	0.84
" powder	"	7.0	Potash, chlorate	"	0.11
Beeswax. Jam.,	per lb.,	0.32	Quinine, Germ.	per oz.,	0.22
Cream of tartar,	"	.20	" Howard's	"	0.32
Camphor	"	.44	Rhubarb	per lb.,	0.30
Cubebs	"	.40	Sarsaparilla	"	0.32
Ergot	"	.36	Soda, caustic	per cwt.,	2.52
Ipecacuanha	"	1.96	bicarbonate	"	1.66
Jalap	"	.24	Shellac	"	17.2